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ERRATA AND ADDENDA

Mineralogical Magazine, vol. 30

PAGE	LINE	
86	10	*For* α-wollastonite *read* α-wollastonite (pseudowollastonite)
733	14	*For* Ferrorhodochrosile *read* Ferrorhodochrosite
750	7	*For* $Na_2Sr_4A_2(PO_4)F_9$ *read* $Na_2Sr_2Al_2(PO_4)F_9$

Mineralogical Magazine, vol. 31

966	8	*For* $Na_2Mg_3Al_2Si_3O_{22}(OH)_2$ *read* $Na_2Mg_3Al_2Si_8O_{22}(OH)_2$

Mineralogical Magazine, vol. 32

lxxvi	14	*For* Dr. M. S. W. Braithwaite *read* Dr. R. S. W. Braithwaite
109	5*	*For* Amer. Journ. Sci., vol. 225 *read* Amer. Journ. Sci., vol. 255
446	12	*For* log e *read* ln 10
450	line 3 of caption to fig. 6	*For* dry *read* hydrothermal
802	2 of summary	*Insert* Ge *after* Ga
804	3*	*For* abundan *read* abundant
808	31	*For* $Na_2SO_3.5H_2O$ *read* $Na_2SO_3.7H_2O$
950	4 & 5	*For* Vuori-Yarvi *read* Vuorijärvi
954	10	*For* Raknapura *read* Ratnapura
964	3 & 4	*For* 1957, 3rd edn., p. 295 *read* 1941 (1st edn), pp. 194, 249
967	3	*For* $Na_3Mg_4FeSi_8\cdots O_{22}(OH)_2$ *read* $Na_3Mg_4Fe\cdots Si_8O_{22}(OH)_2$
988L	19	*For* Nifontovite, $CaB_2O_4.3\frac{1}{2}H_2O$ *read* Nifontovite, $CaB_2O_4.2{\cdot}3H_2O$
989	6*	*For* **Eardlyite** *read* **Eardleyite**
990	20	*For* $CaB_2O_4.3\frac{1}{2}H_2O$ *read* $CaB_2O_4.2{\cdot}3H_2O$
990	21	*For* P. V. Nifontov (П. В. Нифонтов) *read* R. V. Nifontov (Р. В. Нифонтов)
1003R	16*	*For* Braithwaite (M. S. W.) *read* Braithwaite (R. S. W.)
1007L	15	*For* lxxxiii *read* lxxxix
1009R	5*	*For* Braithwaite (M. S. W.) *read* Braithwaite (R. S. W.)
1010R	21	*For* lxxxiii *read* lxxxix

Mineralogical Magazine, vol. 33

lxxxiii *Before* line 6* *insert*: The following exhibit was shown: Sulphur in altered galena from Dene quarry, Cromford, and Hether Water mine, Hazlebadge, Derbyshire, from Engine vein, Alderley Edge, Cheshire, and from Tyndrum mine, Tyndrum, Perthshire. Sulphur with hydrozincite from Hazlebadge and with campylite from Alderley Edge. By Mr. R. S. W. Braithwaite and Mr. G. Ryback.

Plate III, facing p. 124: *For* Vol. XXXII *read* Vol. 33

169	16	*For* den *read* dem
343	3 of summary	*For* the *b* and *c* axes *read* the *a* and *c* axes
358	7 of summary	*For* $(Al,Si)_3O_{22}(OH)_2$ *read* $(Al,Si)_8O_{22}(OH)_2$
362	11	*For* Pyrozene *read* Pyroxene
413	8*	*For* chemica *read* chemical
430	6*	*For* Richey (J. E.), 1959 *read* Richey (J. E.), 1939
509	19	*For* Franz *read* Frantz
647	32	*For* R. 29 G. 141 Syenite *read* R. 29 G. 141 Quartz-syenite
660	Table V, line 4	*For* A. 30 *c* 5·373 *read* A. 30 *c* 5·333

660 Table V, lines 11 to 14 *should read* (*the β values are correct*):

A. 17	*a* 9·921	*b* 18·200	*c* 5·326	*V* 929·4	*a* sin *β* 9·588
A. 18	9·933	18·213	5·332	932·2	9·599
A. 19	9·947	18·271	5·331	937·8	9·628
A. 20	9·949	18·080	5·322	937·7	9·614

714	11*	*For* and they write: *read* they write:
830	2	*For* α-$CaSiO_3$ *read* α-$CaSiO_3$ (pseudowollastonite)

* From bottom of page.

MINERALOGICAL SOCIETY

(*Instituted* 3 *February* 1876)

BYE-LAWS[1]

1. The object of the Mineralogical Society of Great Britain and Ireland, with which the Crystallological Society was amalgamated on 11 December 1883, shall be to advance the knowledge of Mineralogy and also of Crystallography and Petrology.

2. The Society shall consist of Ordinary Members and Honorary Members.

Ordinary Members

3. Every candidate for Ordinary Membership shall be proposed by two Members, one at least of whom shall have personal knowledge of the candidate.

4. Elections to Ordinary Membership shall be made by the Council, and shall be confirmed at the ensuing General Meeting by a majority consisting of three-fourths of the Members present and voting.

5. Ordinary Members shall pay an entrance fee of £1 and annual subscription of £2. 10*s*. 0*d*. They shall be entitled to compound for the annual subscription by a single payment of £60, but Members who have paid their annual subscriptions for fifteen years shall be entitled to compound for £50, and those who have paid such subscriptions for twenty-five years shall be entitled to compound for £40, provided always that no Member shall be entitled to compound who is in arrear with his annual subscription for the preceding calendar year.

6. Annual subscriptions shall be due on the first of January of each year, but Members elected after the first of October shall not be required to pay a subscription for the then current year.

7. No person elected an Ordinary Member of the Society shall be entitled to any of the privileges of Membership until he shall have paid his entrance fee and first annual subscription; and unless these be received within four calendar months of the date of his election, or within such further time as the Council may determine, the election of such person shall be void.

8. At the first Meeting of the Council in each calendar year the name of any Ordinary Member who is in default with his annual subscription for the preceding year shall be brought before the Council, and an intimation that this action has been taken shall be communicated to the Member in writing at his last known address. If at the first meeting in the next ensuing year the Member be still in default and the default be for the two preceding years, the Council shall be empowered to erase his name from the list of Members.

Honorary Members

9. Ten persons, non-resident in Great Britain or Ireland, may be elected Honorary Members. They shall pay neither entrance fee nor annual subscription. They shall

[1] Revised at the Anniversary Meeting of 3 November 1931, and further amended on 7 March 1940, 22 January 1948, 24 June 1948, 1 November 1951, 3 November 1955, and 6 November 1958.

not be entitled to vote on any question relating to the management or business of the Society, nor to serve on the Council of the Society, nor to fill any Office in the Society, but subject to these restrictions shall be entitled to every other privilege accorded to Ordinary Members.

10. Every candidate for Honorary Membership shall be proposed by two Members of the Council, and the election shall be by the Council, and shall be confirmed at the ensuing General Meeting by a majority consisting of three-fourths of the Members present and voting.

Council

11. The Society shall be governed by a Council consisting of a President, two Vice-Presidents, a General Secretary, a Foreign Secretary, a Treasurer, the Editors of the Journal and Abstracts, and twelve Ordinary Members, who shall be elected annually, together with the preceding President,[1] who shall be entitled to remain on the Council for three years from the date of his retirement from the Chair, and, *ex officio*, the Managing Trustees of the Society.

12. The President, General Secretary, Treasurer, and Editors of the Journal and Abstracts shall be deemed the Officers of the Society.

13. A Managing Trustee shall not be precluded by reason of his appointment as such from being an Officer, Vice-President, or Foreign Secretary of the Society.

14. The Officers, Vice-Presidents, Foreign Secretary, and Ordinary Members of Council shall be elected annually at the Anniversary Meeting, which shall be held in November each year or as near thereto as may be convenient.

15. Four Ordinary Members of Council shall retire annually at the Anniversary Meeting, and shall not be eligible for re-election as such until the next Anniversary Meeting.

16. At or before the end of June in each year the Council shall prepare a list of Members nominated by the Council as Officers, Vice-Presidents, Foreign Secretary, and as Ordinary Members of Council for the next ensuing year.

17. The list of Members nominated by the Council in accordance with the preceding Bye-law shall be sent by the General Secretary to every Member of the Society at his last known address not later than the next ensuing 20 July.

18. Additional nominations may be made by Members of the Society, not being Members of the Council, subject to the following conditions:

(*a*) All such nominations must be received by the General Secretary not later than the next ensuing 1 September, and no nomination received after that date shall be valid.

(*b*) Every Candidate, whether proposed as an Officer, Vice-President, Foreign Secretary, or Ordinary Member of Council, must be proposed by not less than eight Members of the Society, not being Members of the Council, who must all sign the Candidate's Nomination Form, which must be accompanied by a statement signed by the Candidate that he accepts nomination.

(*c*) No Member of the Society may propose more than four Candidates.

(*d*) No Candidate may be nominated for more than one position on the Council.

(*e*) No Member of the Society whose name has been entered on the list of Candidates nominated by the Council for Ordinary Membership of Council may accept nomination under this Bye-law for any other position on the Council.

[1] Presidents who were elected previous to the date (1948) of the passing of this Bye-law may remain Life Members of the Council as provided in the original Bye-laws revised in 1931 and 1940.

19. If through death or for any other reason a vacancy should be created on the list circulated by the Council, the Council shall have power to fill the vacancy thus created, and shall notify the Members of the Society of this change as soon as possible, in any case not later than on the notice convening the Anniversary Meeting.

20. If no more than twenty Candidates are nominated and the nominations be in accordance with the provisions of these Bye-laws, the Candidates shall be declared duly elected at the next ensuing Anniversary Meeting.

21. If more Candidates are nominated for any of the positions on the Council set out in Bye-law 11 than there are places to be filled, then an election by Ballot shall be held.

22. In the event of an election by Ballot being required, the General Secretary shall issue to every Member of the Society at his last known address not later than the next ensuing 30 September a voting-paper containing the names of all Candidates duly nominated in accordance with the provisions of these Bye-laws, which list shall show the Office or other position on the Council for which each Candidate has been nominated.

23. No vote may be cast for any Candidate whose name is not entered on the voting list, and no member may vote for more than twenty Candidates in all.

24. Every Member voting shall place his voting-paper when duly completed in an envelope, which shall be closed and placed in another envelope for return to the Scrutineers of the Ballot. The outer envelope must also be closed, must be inscribed 'Voting Paper', and must bear the name of the Member voting, but no indication of the Voter's identity may appear on the voting-paper or on the inner envelope. Members voting may return their voting-papers enclosed in the manner prescribed to the General Secretary beforehand by post or other means or may deliver them to him at the commencement of the Anniversary Meeting.

25. As soon as may be convenient after the opening of the Anniversary Meeting the Chairman of the Meeting shall appoint from amongst the Members present two Members, not being Members of the Council or Candidates for election to the Council, to act as Scrutineers of the Ballot, to whom the outer envelopes containing the voting-papers received by the General Secretary shall be forthwith delivered unopened, and when this has been done the Ballot shall be declared closed.

26. Upon completion of their examination of the voting-papers the Scrutineers shall present to the Chairman of the Meeting a list showing the result of the Ballot, and if the list be in accordance with the provisions of these Bye-laws, the Chairman shall declare the new Council to have been duly elected and to be constituted in accordance with the provisions of these Bye-laws.

27. If, however, any difficulty should arise in constituting the new Council in conformity with the provision of these Bye-laws from the list returned by the Scrutineers owing to an equality of votes or otherwise, the decision of the Chairman, who shall have a casting vote, shall be final, provided always that in no case shall the Chairman declare elected more than sixteen Members who were Members of the retiring Council.

28. The Council shall have power to appoint Officers, and to co-opt Ordinary Members of Council, to fill vacancies in the Council caused by death or resignation during the interval between two Anniversary Meetings.

29. Meetings of the Council shall be summoned by the General Secretary at the order of the President or of not fewer than three Members of the Council; at such meetings six shall be a quorum, of whom one shall be either the President, a Vice-President, the Treasurer, or the General Secretary.

30. A Report of Council on the work and progress of the Society shall be submitted to each Anniversary Meeting.

Property and Trustees

31. Three or more Trustees shall be appointed by the Council. Of the Trustees thus appointed not less than two shall be Managing Trustees selected from amongst the Members of the Society, and one a Custodian Trustee. The Custodian Trustee shall be the Public Trustee or a Bank or other Corporate Body authorized by law to act as Trustee, and the invested property of the Society shall stand in his or its name.

32. Any Member of the Society appointed a Managing Trustee shall be appointed in the first instance for a period of five years, and he shall be eligible thereafter for reappointment for such further periods of five years at any one time as the Council may determine.

33. The Council may from time to time make such purchases of books or other movable effects as they may consider to be required for the furtherance of the objects of the Society and the conduct of its business. They may also dispose of such effects by sale, if not required, provided that no instruction to sell at any one time effects the total value of which exceeds the sum of fifty pounds shall be valid unless endorsed by a resolution passed at a General Meeting of the Society.

34. The Council may authorize the investment of money and the sale of investments. A copy of a resolution of the Council authorizing the sale or purchase of investments, certified by the Chairman of the meeting at which it was passed, shall be sufficient authority to the Managing Trustees to give effect to such resolution.

35. Composition fees shall be treated as Capital, and all moneys so received and all other moneys the investment of which has been authorized by the Council shall be invested in such stock or security as the Council may select from amongst the stocks and securities authorized by law for the investment of trust moneys.

36. No Member of the Society is or shall be entitled to any distinct or separate share in the estate, revenue, or effects of the Society, and the Society shall not and may not make any dividend, gift, division, or bonus in money unto or between any of its Members, provided that nothing herein shall prevent the payment in good faith of reasonable and proper remuneration, or of an honorarium in lieu thereof, to any Member of the Society in return for services rendered to the Society, nor prevent the distribution of copies of the publications of the Society gratis among the Members of the Society.

37. In the event of a dissolution of the Society its property and effects (whether funded or otherwise) shall be disposed of by gift to such other Societies or Institutions or in such other manner as may be decided by the vote of a majority of at least three-fourths of those present and voting at a General Meeting of the Society summoned with notice of the proposed disposal, provided that no individual Members shall benefit thereby, and that such gift or other disposal shall be for the benefit of Mineralogy or its allied sciences.

Meetings

38. General Meetings of the Society shall be summoned from time to time as may be deemed necessary by the Council, or on the requisition of any ten Members of the Society. One of these meetings in each year shall be termed the Anniversary Meeting. Any meeting of the Society summoned for the purpose of considering

special matters relating to the business of the Society shall be termed a Special General Meeting, and the summons thereto shall contain the resolution of other matter to be considered, and shall be issued to the Members not less than four weeks before the date fixed for the Meeting.

Journal

39. The Numbers of the *Mineralogical Magazine and Journal of the Society* and *Mineralogical Abstracts* shall be issued at such intervals as the Council shall determine, and shall be sent, postage paid, to every Member of the Society, other than annual subscribers who are in default with their annual subscriptions for the preceding calendar year.

Auditors and Balance Sheet

40. One Member of the Council and one Ordinary Member of the Society, who is not a Member of the Council, shall be appointed annually by the Council to audit the accounts of the Society.

41. No auditor shall serve for more than three years in succession.

42. The audited Balance Sheet, after submission to the Council, shall be published in the Journal of the Society as early as possible in every year.

Expulsion of Members

43. A majority consisting of three-fourths of the whole Council shall have power to expel a Member from the Society, but a Member who has been expelled shall have a right of appeal to the Society. Notice of such appeal to the Society shall be sent by such Member to the General Secretary within four weeks of the expulsion, and the appeal shall be considered by the Society at the next Anniversary Meeting or at a Special General Meeting; a majority of the votes recorded at such Meeting sufficing to confirm or annul the decision of the Council.

Alteration of the Bye-laws

44. The Bye-laws may be altered only at an Anniversary Meeting or at a Special General Meeting duly summoned for the purpose of considering the proposed alterations, and only by a majority consisting of three-fourths of the Members present and voting. Notice of changes proposed to be made in the Bye-laws shall be communicated by the General Secretary to every Ordinary Member of the Society at least four weeks before the Anniversary Meeting or the Special General Meeting summoned for the purpose of their consideration.

Obligation Book

45. Ordinary Members, by payment of their entrance fee, signify their acceptance of any Bye-laws approved by the Society; and every Member of the Society shall sign an Obligation Book.

Interpretation

46. In the interpretation of the Bye-laws words in the masculine gender only shall include the feminine gender also.

PAST-PRESIDENTS

H. C. Sorby, 1876–9
M. F. Heddle, 1879–81
W. H. Hudleston, 1881–3
T. G. Bonney, 1883–5
L. Fletcher, 1885–8
R. H. Scott, 1888–91
M. H. N. Story-Maskelyne, 1891–8
A. H. Church, 1898–1901
H. H. W. Müller, 1901–4
H. A. Miers, 1904–9
W. J. Lewis, 1909–12
A. E. H. Tutton, 1912–15
W. Barlow, 1915–18
W. P. Beale, 1918–21
A. Hutchinson, 1921–4
W. W. Watts, 1924–7
G. T. Prior, 1927–30
J. S. Flett, 1930–3
T. H. Holland, 1933–6
L. J. Spencer, 1936–9
A. E. I. M. Russell, 1939–42
F. N. Ashcroft, 1942–5
W. Campbell Smith, 1945–8
C. E. Tilley, 1948–51
J. Phemister, 1951–4
L. Hawkes, 1954–7
C. E. Tilley, 1957–60

LIST OF MEMBERS

HONORARY MEMBERS

Year of Election

1962 Bandy,[1] Mark Chance, A.B., M.A., Ph.D., E.M. *P.O. Box 31, Wickenburg, Arizona, U.S.A.*

1958 Buttgenbach,[2] Henri Jean François. Formerly Professor of Crystallography and Mineralogy in the University of Liège. *Avenue Madoux 129, Woluwe, St. Pierre, Belgium.*

1962 Ito, Tei-ichi, D.Sc., Professor of Mineralogy, *Mineralogical Institute, Science Department, University of Tokyo, Bunkio-ku, Tokyo, Japan.*

1962 Machatschki, Felix Karl Ludwig. Professor, Dr. *Mineralogisches Institut der Universität Wien, Wien 1, Austria.*

1945 Orcel, Jean. Professor of Mineralogy in the Muséum National d'Histoire Naturelle. *61 Rue de Buffon, Paris V, France.*

1950 Quensel, Percy. Emeritus Professor of Mineralogy, *Stockholm University, Drottninggatan 116, Stockholm, Sweden.*

1962 Ramdohr, Paul. Professor of Mineralogy, Dr.Phil., Dr.Ing. E.h., Dr. rer. nat. h.c. *Universität Heidelberg, Heidelberg, Germany.*

1945 Schaller,[3] Waldemar Theodore, Ph.D. *United States Geological Survey, Washington 25, D.C., U.S.A.*

1945 Shubnikov, Aleksei Vasilievich. Director of the *Institute of Crystallography, Academy of Sciences, Staromonetnyi 35, Moscow 17, U.S.S.R.*

[1] Ordinary Member 1932–61.
[2] Ordinary Member 1919–58.
[3] Ordinary Member 1912–45.

ORDINARY MEMBERS[1]

(31 *January* 1962)

* Life Members.
† Members of long standing exempt from annual subscription.
‡ Members of Clay Minerals Group.

Year of Election

1959 Abbott, Donovan William, B.Sc. *Dept. of Mineralogy and Petrology, Downing Place, Cambridge.*

1960 Abdullaev, Khabib M., Professor of Ore Deposits. *Institute of Geology, Tashkent, Stalin Street 33, Uzbekistan, U.S.S.R.*

1956 ‡Ackermann, Keith John, B.Sc., F.G.S. *Geological Survey of Great Britain, Atomic Energy Division, Young Street, Kensington, London W. 8.*

1931 Adams, Leason Herberling, B.S., D.Sc. *Institute of Geophysics, University of California, Los Angeles 24, California, U.S.A.*

1955 Adams, Peter Joseph, B.Sc., F.G.S. *Geological Survey and Museum, Exhibition Road, London S.W. 7.*

1950 Adamson, Olge Johan Jungstedt, Ph.D. *Drachenfeltsstraße 9, Bonn, Germany.*

1960 ‡Addison, William Eric, B.Sc., Ph.D. *Department of Chemistry, The University, Nottingham.*

1950 Adie, Raymond John, B.Sc., Ph.D. *Falkland Islands Dependencies Survey, Dept. of Geology, The University, Birmingham 15.*

1939 ‡Agrell, Stuart Olof, B.A., Ph.D., F.G.S. *Dept. of Mineralogy and Petrology, Downing Place, Cambridge.*

1956 ‡Aguilera-Herrera, Nicolas, M.Sc., Dr. *Andromeda No. 22, Mexico 13, D.F., Mexico.*

1954 ‡Ahrens, Louis Herman, B.Sc., M.A., D.Sc., F.R.I.C. Professor of Physical and Inorganic Chemistry. *Dept. of Chemistry, University of Cape Town, Rondebosch, Cape Province, South Africa.*

1947*‡Albareda Herrera, José Maria. Professor. *Consejo Superior de Investigaciones Cientificas, Serrano 121, Madrid, Spain.*

1933 ‡Alderman, Arthur Richard, D.Sc., Ph.D., F.G.S. Professor of Geology and Mineralogy, *University of Adelaide, South Australia.*

1956 ‡Allen, Anthony William, M.Sc., A.M.I.M.M. *Soil Laboratory, Dept. of Agriculture, Sandakan, British North Borneo.*

1950 Allen, John Barry, B.Sc., Ph.D., F.G.S. *Mineral Resources Division, Overseas Geological Surveys, 64–78 Gray's Inn Road, London W.C. 1.*

1954 Al Naqib, Khorshid Mohammed, B.Sc., F.G.S., F.R.G.S. *Geological Dept., I.P.C. Ltd., Kirkuk, Iraq.*

1956 Amorós, José Luis, Ph.D. Professor of Crystallography in the University of Madrid, *Dept. of Crystallography, Museo de Ciencias Naturales, Paseo de la Castellana 84, Madrid, Spain.*

1928 *Anderson, Basil William, B.Sc., F.C.S. *Ladylane, Lodge Hill, Ditchling, Sussex.*

1948 Anderson, John Graham Comrie, M.A., Ph.D., D.Sc., F.R.S.E. Professor of Geology, *University College, Newport Road, Cardiff.*

1959 ‡Anderson, Ronald Elrick, B.Sc., F.G.S. *Alumina Jamaica Ltd., Williamsfield, P.O., Jamaica, West Indies.*

1945 Anderson, William, M.Sc., F.G.S., F.R.S.E. *9 Woodbine Avenue, Gosforth, Newcastle upon Tyne 3.*

[1] Corrections for this list should be sent to the Secretary, Mineralogical Society, 41 Queen's Gate, South Kensington, London S.W. 7.

Year of Election

1926 ‡*Andrew, Gerald, M.Sc., F.G.S. *The 'Reporter' Office, Market Square, Ashton-under-Lyne, Lancashire.*

1941 Andrews, Gordon Frederick. *Saint Dunstan's House, Carey Lane, London E.C.2.*

1961 Appleman, Daniel Everett, B.S., M.A., Ph.D. *U.S. Geological Survey, Washington 25, D.C., U.S.A.*

1939 Archambault, Maurice, Dr. Chief of the *Division of Mineralogy and Chemistry, Quebec Bureau of Mines, Parliament Buildings, Quebec City, Canada.*

1948 Archibald, William Anderson, B.Sc., Ph.D. *c/o B.I.S.R.A., Physics Laboratory, 140 Battersea Park Road, London S.W. 11.*

1958 Armstrong, Donald, B.Sc.

1955 ‡Armsworth, Donald Clive, F.G.S. *3 Wray Close, Wray Common Road, Reigate, Surrey.*

1954 ‡Arnott, Ronald James, B.Sc., M.Sc. *Lincoln Laboratory, P.O. Box 73, Lexington 73, Massachusetts, U.S.A.*

1958 Ashford, John Hatfield, B.Sc. *Flat 5, 114 Cookham Road, Maidenhead, Berkshire.*

1961 ‡*Asklund, Ann Marie, Dr. *Geological Survey of Sweden, Stockholm 50, Sweden.*

1936 Aspland, Vivien Lindsey, M.C., A.R.S.M., A.M.I.M.M. *'Serendah', Upton Cliff, Bude, Cornwall.*

1953 ‡Augustithis, Stylianos Savvas, B.Sc., Dr. rer. nat. *P.O. Box 157, Addis Ababa, Ethiopia.*

1951 Axelrod, Joseph Meyer, B.S., M.S. *3171 South Bundy Drive, Santa Monica, California, U.S.A.*

1956 ‡Bailey, Sturges Williams, Ph.D. *Dept. of Geology, University of Wisconsin, Madison 6, Wisconsin, U.S.A.*

1962 Bain, James Andrew, B.Sc., F.G.S. *6 Fern Close, Billericay, Essex.*

1948 *Baker, George, M.Sc., D.Sc. *Mineragraphic Investigations, C.S.I.R.O., c/o University of Melbourne, Carlton N. 3, Victoria, Australia.*

1949 ‡Ball, David Francis, B.A. *The Nature Conservancy Headquarters for Wales and Bangor, Research Station, Penrhos Road, Bangor, Caernarvonshire.*

1927 *Bannister, Frederick Allan, M.A., Sc.D., F.Inst.P. Formerly Keeper of Minerals in the British Museum. *Chantry House, Vicarage Lane, Horley, Surrey.*

1953 Barratt, Alfred Henry Douglas. *P.O. Box 168, Broken Hill, New South Wales, Australia.*

1951 Barron, Christopher Norman, B.A. *c/o Geological Survey, Brickdam, Georgetown, British Guiana, South America.*

1939 Barth, Thomas Fredrik Weybye, M.A., Ph.D. Professor, *Mineralogisk-Geologisk Museum, Oslo 45, Norway.*

1956 Bartholomé, Paul, A.I. Lg., M.A., Ph.D., Professor. *B.P. 117, Leopoldville XI, Congo.*

1950 Basta, Emile Zaghlool. B.Sc., M.Sc., Ph.D., F.G.S. *Department of Geology, Faculty of Science, Cairo University, Giza, Egypt.*

1947 ‡Bates, Thomas Fulcher, B.A., M.S., Ph.D., A.I.M.E. *317 Mineral Sciences, Pennsylvania State University, University Park, Pennsylvania, U.S.A.*

1952 ‡Battey, Maurice Hugh, M.Sc., F.G.S. *Geology Dept., King's College, Durham University, Newcastle upon Tyne 1.*

1948 ‡Bawden, Frederick Charles Michell. *Geological Dept., New Consolidated Goldfields Ltd., P.O. Box 1167, Johannesburg, South Africa.*

1928 ‡Beard, Edward Harold, B.Sc. *Mineral Resources Division, Overseas Geological Surveys, 64–78 Gray's Inn Road, London W.C. 1.*

Year of Election

1950 Beck, Carl Wellington, A.B., A.M., Ph.D. *Dept. of Geology, Indiana University, Bloomington, Indiana, U.S.A.*

1952 ‡Bensusan, (Mrs.) Margaret Dorothy, B.A., F.R.G.S. *8615 Columbus Avenue, Sepulveda, California, U.S.A.*

1958 ‡Berkin, Leslie Vincent Ivan. *c/o Pike Bros., Fayle, and Co. Ltd., Claymines, Wareham, Dorset.*

1929 ‡Bernal, John Desmond, M.A., F.R.S. Professor of Physics, *Birkbeck College Research Laboratory, 21 Torrington Square, London W.C. 1.*

1938 *Berry, Leonard Gascoigne, M.A., Ph.D. Associate Professor of Mineralogy, *Queen's University, Kingston, Ontario, Canada.*

1947 ‡Bessey, George Edward, M.Sc., F.R.I.C. *c/o Chalk Lime and Allied Industries Research Association, The Hall, 30 Church Street, Welwyn, Hertfordshire.*

1958 ‡Beveridge, Alexander James, B.Sc., M.Sc. *64 Heston Street, Calgary, Alberta, Canada.*

1954 ‡Bilgrami, Sabihuddin Ahmed, B.Sc., Ph.D., A.I.S.M., F.G.S. *Pakistan Chrome Mines Ltd., Hindubagh, West Pakistan.*

1959 Binns, Raymond Albert, B.Sc. *Trinity College, Cambridge.*

1948 ‡Bird, Frederick William. *'Braddon', Godstone Road, Bletchingley, Surrey.*

1952 Bishop, Arthur Clive, B.Sc., Ph.D., F.G.S. *Dept. of Geology, Queen Mary College, Mile End Road, London E. 1.*

1954 Black, George Purves, B.Sc., Ph.D., F.G.S. *14 Kneller Road, New Malden, Surrey.*

1958 Bloss, Fred Donald, B.S., M.S., Ph.D. *Dept. of Geology, Southern Illinois University, Carbondale, Illinois, U.S.A.*

1948 ‡Blott, John Frederick Thomas, B.Sc. *Thornton Research Centre, P.O. Box 1, Chester.*

1952 Bloxham, Thomas Wallace, B.Sc., F.G.S. *Dept. of Geology, University College, Singleton Park, Swansea, Glamorganshire.*

1954 Bolfa, Joseph, Professor. *Institut de Minéralogie, 4 Avenue Heydenreich, Nancy, France.*

1958 Bonanno, Antonio Charles. *815 Aspen Street N.W., Washington 12, D.C., U.S.A.*

1957 Bond, Joyce Marjorie, B.Sc., F.G.S. *Ministry of Works, Nairobi, Kenya.*

1960 Borley, (Mrs.) Gloria Diana. *26A Wingfield Road, Walthamstow, London E. 17.*

1931 Bottley, Edward Percival, F.G.S. *30 Old Church Street, Chelsea, London S.W. 3.*

1927 Boubée, Nérée, Licencié-ès-Sciences. *3 Place St. André-des-Arts, Paris VI, France.*

1954 ‡Bourbeau, Gerard Auguste, B.A., B.S., M.S., Ph.D., Dean, *Faculty of Arts and Science, Laurentian University, Sudbury, Ontario, Canada.*

1960 Bowes, Donald Ralph, M.Sc., Ph.D., D.I.C., F.G.S. *Dept. of Geology, The University, Glasgow W. 2.*

1948 Bowie, Stanley Hay Umphray, B.Sc. *Geological Survey of Great Britain, Atomic Energy Division, Young Street, Kensington, London W. 8.*

1955 Bown, Michael George, M.A. *Dept. of Mineralogy and Petrology, Downing Place, Cambridge.*

1960 Bowden, Peter, B.Sc., Ph.D. *The Geological Survey, Dodoma, Tanganyika.*

1957 Boyd, David, B.A., F.G.S. *7 The Woodlands, London Road, Harrow-on-the-Hill, Middlesex.*

1951 Bradley, (Mrs.) Olive, B.Sc., Ph.D., F.G.S. *83 Muswell Hill Road, Muswell Hill, London N. 10.*

Year of Election

1947 ‡Bradley, William Frank, Ph.D. *Dept. of Chemical Engineering, 308A Engineering Laboratories, University of Texas, Austin, Texas, U.S.A.*

1958 ‡Bradshaw, Neville, B.Sc. *5 Elm Street, Colne, Lancashire.*

1951 Bradshaw, Reginald, B.Sc., F.G.S. *Dept. of Geology, The University, Bristol 8.*

1960 Braithwaite, Richard Stanley William, B.Sc., Ph.D., A.R.I.C. *Chemistry Dept., Manchester College of Science and Technology, Manchester 1.*

1952 Braunfeld, Asher S. *c/o Israel Geological Surrey, Hebron Road, Jerusalem, Israel.*

1957 ‡Brehler, Bruno Ernst Joseph, Dr. *Mineralogisches Institut der Universität Deutschhausstraße 10, Marburg/Lahn, Germany.*

1949 ‡Briebach, Albert Victor, F.G.S. *'Grayswood', Overdale Road, Willaston, Wirral, Cheshire.*

1946 ‡*Brindley, George William, M.Sc., Ph.D., F.Inst.P. Professor of Solid State Technology, *Dept. of Ceramic Technology, Pennsylvania State University, University Park, Pennsylvania, U.S.A.*

1953 Broch, Olaf Anton, State Geologist. *Geological Institute, University of Oslo, Blindern, Norway.*

1950 Brognon, Georges Philippe. General Manager, *Missão de Pesquisas Petrofina, P.O. Box 1320, Luanda, Angola.*

1950 Brothers, Raymond Nicholas, M.Sc., Ph.D., D.I.C., F.G.S. *Geology Dept., University College, Princes Street, Auckland C.I., New Zealand.*

1952 Brown, Cyril Simon, B.Sc., A.Inst.P. *Research Laboratories, General Electric Company Ltd., East Lane, North Wembley, Middlesex.*

1947 ‡Brown, George, B.Sc. *Rothamsted Experimental Station, Harpenden, Hertfordshire.*

1951 ‡Brown, George Malcolm, M.A., D.Phil., B.Sc., F.G.S. *Dept. of Geology and Mineralogy, University Museum, Oxford.*

1959 Brown, Peter Evans, B.Sc., Ph.D., F.G.S. *Geology Dept., The University, Sheffield 10.*

1959 ‡Brown, Thomas Edwards. *1209E Brackenridge Apts., Austin, Texas, U.S.A.*

1960 ‡Brown, William Liddle, Dr. *Eidg. Tech. Hochschule, Institut für Kristallographie und Petrographie, Sonneggstraße 5, Zürich 6, Switzerland.*

1951 ‡Bruijn, Cornelis Marinus Adrianus de. *Soils Mechanics Section, Council for Scientific and Industrial Research, P.O. Box 395, Pretoria, South Africa.*

1958 ‡Bundy, Wayne Miley, Ph.D. *Georgia Kaolin Co., 433 North Broad Street, Elizabeth 3, New Jersey, U.S.A.*

1946 Burbage, Edgar John, *26 Wolseley Gardens, Chiswick, London W. 4.*

1957 ‡Burke, Kevin Charles, B.Sc., Ph.D., F.G.S. *Geology Dept., University College of the West Indies, Mona, Kingston 7, Jamaica, West Indies.*

1926 *Burri, Conrad Robert, Ph.D., Professor. *Mineralogical Institute, Sonneggstraße 5, Zürich 6, Switzerland.*

1952 ‡Burst, John Fred, Ph.D. *3737 Bellaire Boulevard, Houston, Texas, U.S.A.*

1954 ‡Butcher, Norman Edward, B.Sc., F.G.S. *Geology Dept., The University, Reading.*

1957 ‡Butler, Barry Conrad Milne, B.A., F.G.S. *Dept. of Geology and Mineralogy. University Museum, Oxford.*

1947 ‡*Butler, John Russell, M.A., Ph.D. Reader in Pure Geochemistry, *Geology Department, Imperial College of Science and Technology, Prince Consort Road, London S.W. 7.*

Year of Election

1954 ‡Caillère, (Mlle.) Simonne Anne Marie. *Laboratoire de Minéralogie, Muséum d'Histoire Naturelle, 61 Rue de Buffon, Paris V, France.*

1960 Campos, Joãs Ernesto de Souza, Professor of Mineralogy and Petrology, *Rua Estados Unidos 2233, São Paulo, S.P., Brazil.*

1956 ‡Candlin, (Mrs.) David (*née* Eileen Rosemary Sylvester Shaw), M.A., Ph.D. *9 Merchiston Avenue, Edinburgh 10.*

1961 Cann, Johnson Robin, B.A. *Dept. of Mineralogy and Petrology, Downing Place, Cambridge.*

1954 Carmichael, Ian Stuart Edward. *46 The Chase, Clapham, London S.W. 4.*

1959 Carpenter, Alden Bliss, A.B. *94 Pleasant Street, Lexington 73, Massachusetts, U.S.A.*

1950 ‡Carroll, (Miss) Dorothy, B.A., B.Sc., Ph.D., D.I.C. *Geochemistry and Petrology Branch, U.S. Geological Survey, Washington 25, D.C., U.S.A.*

1962 Challis, Gwyneth Alva, M.A. *Dept. of Mineralogy and Petrology, Downing Place, Cambridge.*

1955 ‡Chambers, Geoffrey Prytherch Campbell. *29 Hedley Road, St. Albans, Hertfordshire.*

1960 Chappell, Bruce William, B.Sc. *Geology Dept., Canberra University College, Canberra, A.C.T., Australia.*

1955 Chudoba, Karl F., Professor, Dr. *Thomas-Mann-Straße 7, Göttingen, Germany.*

1950 Clare, Kenneth Ernest, B.Sc., A.R.I.C. *Road Research Laboratory, Harmondsworth, West Drayton, Middlesex.*

1935 ‡*Claringbull, Gordon Frank, B.Sc., Ph.D., A.Inst.P., F.G.S. Keeper of Minerals, *British Museum (Natural History), Cromwell Road, London S.W. 7.*

1961 ‡Clark, Alan Horrell, B.Sc., A.R.S.M. *Geology Dept., The University, Manchester 13.*

1948 ‡Clark, Norman Owen, Ph.D., M.Sc., D.I.C. *c/o English Clays Lovering Pochin & Co. Ltd., St. Austell, Cornwall.*

1947 Clausen, Hans Carl Eisenreich, M.Sc. *Mineralogical Museum, Østervoldgade 7, Copenhagen, Denmark.*

1957 Clifford, Tom Neville, B.Sc., Ph.D., F.G.S. *Dept. of Geology, The University, Leeds 2.*

1952 ‡Cockbain, Alan Gray. *Crimble Cottage, 2 Memorial Green, Roade, Northampton.*

1949 ‡Cohen, Enrico, M.Sc., F.G.S. *58 Wolsey Road, Moor Park, Northwood, Middlesex.*

1949 Cohen, (Mrs.) Judith Augusta Maria, B.Sc., F.G.S. *58 Wolsey Road, Moor Park, Northwood, Middlesex.*

1927 *Coke, Basil Elmsley, O.B.E., M.A., Lt.-Col. R.E. (retd.). *Army and Navy Club, Pall Mall, London S.W. 1.*

1947 Collier, William Marshall, B.Sc., A.M.Inst.E. *11 Bradley Avenue, Houghton-le-Spring, Co. Durham.*

1950 ‡Collini, Bengt Henri Emanuel. *Tiundagatan 39, Uppsala, Sweden.*

1959 ‡Collins, Geoffrey Herbert, B.Sc., F.G.S. *c/o Geological Survey and Museum, Exhibition Road, London S.W. 7.*

1941 Collins, Reginald Stevenson, Ph.D., B.Sc., D.I.C., F.G.S. *18 Upper Park Road, London N.W. 3.*

1950 Cooke, Reginald Ernest, B.Sc., M.I.M.M. *3 Lynton Close, Hurstpierpoint, Sussex.*

1947 ‡Coomber, Stephen Edward, A.R.S.M., B.Sc., D.I.C. *'Sakers Mead', Reigate Hill, Reigate, Surrey.*

Year of Election

1949 Coombs, Douglas Saxon, M.Sc., Ph.D., F.G.S. Professor of Geology, *University of Otago, Dunedin N.I., New Zealand.*

1948 Correns, Carl Wilhelm Erich. Professor, *Sedimentpetrographisches Institut, Lotzestraße 13, Göttingen 20, Germany.*

1946 Cotelo Neiva, João Manuel, D.Sc., D.Ph. Professor. *Museu e Laboratório Mineralógico e Geológico, Universidade de Coimbra, Portugal.*

1960 Cotton, Nigel. *Fold Cottage, Fold Terrace, Cheddleton, Nr. Leek, Staffordshire.*

1961 ‡Coussell, Derek Ernest, B.Sc., F.G.S. *Ghana University of Science and Technology, Kumasi, Ghana.*

1960 Coutinho, Jose Moacyi Vianna, Professor. *Dept. of Mineralogy and Petrology, C.P. 8105, São Paulo, Brazil.*

1961 ‡Cowan, Colin Thomas, Ph.D., A.R.I.C. *The Fuller's Earth Union Ltd., Patteson Court, Nutfield Road, Redhill, Surrey.*

1951 Croasdale, Ronald, B.Sc., Ph.D., F.G.S. *Geology Dept., Imperial College of Science and Technology, Prince Consort Road, London S.W. 7.*

1953 ‡Croft, William Joseph, B.Sc., M.A., Ph.D. *Sperry Road Research Center, North Road, Sudbury, Massachusetts, U.S.A.*

1957 ‡Cummins, Arthur Benson, B.S., Ph.D. *Morning Glory Road, Bound Brook, New Jersey, U.S.A.*

1958 ‡Cundy, Edwin Kenneth. *33 Margaret Avenue, St. Austell, Cornwall.*

1952 Currall, Arnold Edward, B.A., F.G.S. *Dept. of Geology, St. George's Square, Sheffield 1.*

1962 Daniels, John Leonard, Ph.D., M.Sc., F.G.S. *Geological Survey, Hargeisa, Somaliland, North-East Africa.*

1958 Darnley, Arthur George, M.A., F.G.S. *24 Amery Road, Harrow, Middlesex.*

1935 *Davidson, Charles Findlay, O.B.E., D.Sc., F.R.S.E., F.G.S. Professor of Geology, *St. Andrews University, Gowan Park, Cupar, Fife, Scotland.*

1956 ‡Davidson, Douglas Colin, B.Sc., F.G.S. *British Coal Utilization Research Association, Randall's Road, Leatherhead, Surrey.*

1954 ‡Davies, George Eveleigh, B.Sc., F.G.S. *British Iron and Steel Research Association, c/o Blast Furnace Laboratory, Imperial College of Science and Technology, Prince Consort Road, London S.W. 7.*

1926 Davies, George MacDonald, M.Sc., F.G.S. *63 Beechwood Road, Sanderstead, Surrey.*

1947 ‡Davies, William, Ph.D., M.Sc., F.G.S. *60 Woodholm Road, Sheffield 11.*

1958 ‡Davis, Richard John, M.A., D.Phil. *Dept. of Mineralogy, British Museum (Natural History), Cromwell Road, London S.W. 7.*

1959 ‡Dawson, John Barry, B.Sc. *Geological Survey, Dodoma, Tanganyika, East Africa.*

1939 Deans, Thomas, M.A., F.G.S. *Mineral Resources Division, Overseas Geological Surveys, 64–78 Gray's Inn Road, London W.C. 1.*

1948 Dearman, William Robert, B.Sc., Ph.D., A.R.C.S., F.G.S. *10 Melville Gardens, West Monkseaton, Whitley Bay, Northumberland.*

1959 ‡Dearnley, Raymond, B.Sc., F.G.S. *Petrographical Dept., Geological Survey and Museum, Exhibition Road, London S.W. 7.*

1955 ‡De Endredy, Andrew Sigmund, Ph.D. *Dept. of Soil and Land-use Survey, Private Post Bag, Kumasi, Ghana, West Africa.*

1936 Deer, William Alexander, M.Sc., Ph.D., F.G.S. Professor of Mineralogy and Petrology, *Dept. of Mineralogy and Petrology, Downing Place, Cambridge.*

Year of Election

1955 Devries, Robert Charles, B.A., Ph.D. *17 Van Vorst Drive, Burnt Hills, New York, U.S.A.*

1961 De Wys, Egbert Christiaan, B.A., M.A., Ph.D., F.R.M.S. *2763 Williams Road, San José, California, U.S.A.*

1955 ‡Dietrich, Richard Vincent, A.B., M.S., Ph.D. *Dept. of Geology, Virginia Polytechnic Institute, Blacksburg, Virginia, U.S.A.*

1961 ‡Dingsdale, Peter Andrew, B.Sc. *16 Rigby Street, St. Helens, Lancashire.*

1937 Dixey, Frank, C.M.G., O.B.E., D.Sc., M.I.M.M., F.G.S. *Windyridge, Mandlin Close, Steyning, Sussex.*

1958 ‡Docherty, Bernard Gavin.

1957 ‡Dodd, Charles Gardner, Ph.D. Professor. *College of Engineering, University of Oklahoma, Norman, Oklahoma, U.S.A.*

1933 ‡Dollar, Archibald Thomas John, B.Sc., Ph.D., F.R.S.E., M.I.M.M., F.G.S. *Reader in Geology, University of London, Birkbeck College, Malet Street, London W.C. 1.*

1961 ‡Doman, Robert Charles, B.S., M.A. *Corning Glass Works, P.P. No. 2, Corning, New York, U.S.A.*

1940 Donnay, Joseph Désiré Hubert, E.M., Ph.D. Professor of Crystallography and Mineralogy. *Dept. of Chemistry, Johns Hopkins University, Baltimore 18, Maryland, U.S.A.*

1961 Douglas, John Alexander Vibert, B.Sc., D.Phil. *Dept. of Geology and Mineralogy, University Museum, Oxford.*

1958 ‡Drennan, John Alexander, B.Sc. *P.O. Box 1517, Durban, Natal, South Africa.*

1937 Drever, Harold Irving, B.Sc., Ph.D., F.R.S.E. *Dept. of Geology and Mineralogy, The University, St. Andrews, Fife.*

1961 ‡Dumbleton, Michael John, B.Sc., Ph.D., A.Inst.P. *Road Research Laboratory, Harmondsworth, West Drayton, Middlesex.*

1961 Dunham, Ansel Charles, B.A. *Dept. of Geology and Mineralogy, University Museum, Oxford.*

1938 ‡Dunham, Kingsley Charles, D.Sc., Ph.D., S.D., M.I.M.M., F.G.S., F.R.S. Professor of Geology, *University of Durham, Science Laboratories, South Road, Durham.*

1936 *Dunn, John Alexander, D.Sc., D.I.C., F.G.S. *29 Turnbull Avenue, Toorak, Melbourne S.E. 2, Victoria, Australia.*

1950 Dunning, Frederick Weir, B.Sc. *Geological Survey and Museum, Exhibition Road, London S.W. 7.*

1952 Dyson, Peter, B.Sc. *Bickerton, St. Lawrence, Ventnor, Isle of Wight.*

1950 ‡Earley, James William, B.Sc., M.A., Ph.D. *Gulf Research and Development Co., P.O. Drawer 2038, Pittsburgh 30, Pennsylvania, U.S.A.*

1926 *Eckermann (Claes Walther) Harry von, Ph.D. Hon. Professor of Petrology, University of Stockholm. *Edeby Ripsa, Sweden.*

1961 ‡Edgar, Alan Douglas, B.A., M.Sc. *Apartment 33, Viceroy Court, Wilmslow, Didsbury, Manchester 20.*

1952 ‡*Edwards, Richard Charles John, B.Sc., A.R.S.M. *Apartment 1, 100 Frontenac Street, Noranda, Quebec, Canada.*

1957 Elders, Wilfred Allan, B.Sc. *Dept. of Geology, University of Chicago, Chicago 37, Illinois, U.S.A.*

1960 ‡Elliot, Ivor Llewellyn, B.Sc. *64 Abbot Street, Awsworth, Nottinghamshire.*

1952 Elliot, Ranald William, B.Sc., F.G.S. *Geological Survey and Museum, Exhibition Road, London S.W. 7.*

Year of Election

1948 Elliott, Robert Brian, B.Sc., Ph.D., F.G.S. *Dept. of Geology, The University, Nottingham.*

1959 ‡Ellis, Stanley Ernest, B.Sc., F.G.S. *Dept. of Mineralogy, British Museum (Natural History), Cromwell Road, London S.W. 7.*

1948 Embrey, Peter Godwin, B.Sc., M.A., A.R.I.C. *Dept. of Mineralogy, British Museum (Natural History), Cromwell Road, London S.W. 7.*

1957 ‡Emeléus, Charles Henry, M.Sc., D.Phil., F.G.S. *Dept. of Geology, University Science Laboratories, South Road, Durham.*

1958 ‡Emmons, Richard Conrad, M.A., Ph.D. *Dept. of Geology, University of Wisconsin, Madison, Wisconsin, U.S.A.*

1956 ‡Engelhardt, Wolf von, Dr.Phil., Professor. *Mineralogisches Institut der Universität, Wilhelmstraße 56, Tübingen, Germany.*

1958 Evans, Bernard William, B.Sc., F.G.S. *Dept. of Geology, University of California, Berkeley 4, California, U.S.A.*

1960 ‡Evans, Graham, B.Sc., Ph.D. *Geology Dept., Imperial College of Science and Technology, Prince Consort Road, London S.W. 7.*

1939 *Evans, Robert Crispin, Ph.D., M.A., B.Sc. *Dept. of Mineralogy and Petrology, Downing Place, Cambridge.*

1944 Evans, William David, M.Sc., Ph.D., A.I.M.M., F.G.S., F.R.G.S. Professor of Geology, *The University, Nottingham.*

1956 ‡Exley, Colin Stewart, M.A., D.Ph., F.G.S. *Dept. of Geology, University College of North Staffordshire, Keele, Staffordshire.*

1946 ‡Eyles, Victor Ambrose, B.Sc., F.R.S.E., F.G.S. *The Vicarage, Milton-under-Wychwood, Oxford.*

1943 Fahey, Joseph John. *United States Geological Survey, Washington 25, D.C., U.S.A.*

1957 ‡Fan, Pow Foong, B.S. *522 Landfair Avenue, Los Angeles 24, California, U.S.A.*

1960 Faria, José Walter. *Rua João Lira 158, Ap. 202, Leblon, Rio de Janeiro, Brazil.*

1958 ‡Farlam, Jeffrey Raymond, B.Sc. *The Kaduna Syndicate Ltd., Post Office, Jos, Northern Nigeria.*

1943 ‡Faust, George Tobias, B.S., M.S., Ph.D. *United States Geological Survey, Washington 25, D.C., U.S.A.*

1949 ‡Favejee, Johan Christiaan Louis, Ph.D. *Geological Institute, Duivendaalselaan 2, Wageningen, Netherlands.*

1961 ‡Favretto, Luciano, Chemist. *Servizio Geochimico, AGIP Mineraria, San Donato Milanese, Milano, Italy.*

1958 ‡Fawcett, James Jeffrey, B.Sc. *Geophysical Laboratory, 2801 Upton Street N.W., Washington 8, D.C., U.S.A.*

1926 *Fearnsides, William George, M.A., F.R.S. Emeritus Professor of Geology, University of Sheffield. *11 Ranmoor Crescent, Sheffield 10.*

1947 *Ferguson, Robert Bury, M.A., Ph.D. *Dept. of Geology, University of Manitoba, Winnipeg, Canada.*

1951 Finch, James, B.E., B.Sc. *Dominion Laboratory, Sydney Street West, Wellington, New Zealand.*

1951 Finch, Leslie Gordon, B.Met., Ph.D. *Brenva, Grindleford, Nr. Sheffield, Yorkshire.*

1953 ‡Firman, Ronald John, B.Sc., Ph.D., F.G.S. *Dept. of Geology, The University, Nottingham.*

1946 Fisher, Daniel Jerome, Ph.D. Associate Professor of Mineralogy, *Dept. of Geology, University of Chicago, Chicago 37, Illinois, U.S.A.*

Year of Election

1950 Fitch, Frank John, F.R.G.S. *'Polarbjørn', 21 Harcourt Drive, Herne Bay, Kent.*

1943 Fleischer, Michael, B.Sc., Ph.D. *United States Geological Survey, Washington 25, D.C., U.S.A.*

1953 Flinn, Derek, B.Sc., Ph.D., A.R.C.Sc., D.I.C., F.G.S. *Geology Dept., The University, Liverpool.*

1948 Folch-Girona, Joaquin. *Calle Provenza 302, Barcelona, Spain.*

1956 ‡Font-Altaba, Manuel, Dr. Sc. *Rocafort 111, Barcelona, Spain.*

1926 Ford, Hugh Alexander, C.M.G. *736 Riverside Drive, Apartment 6–C, New York 31, N.Y., U.S.A.*

1954 Ford, Ian Hubert, B.Sc. *Geology Dept., The University, Bristol 8.*

1962 ‡Fordon-Bellgrove, Lucian Cedric, B.Sc. *Dept. of Geology and Geophysics, The University of Sydney, Sydney, New South Wales, Australia.*

1947 ‡Forman, Sydney A., M.A. *Chemistry Division, Science Service, Dept. of Agriculture, Ottawa, Canada.*

1962 Fornaseri, Mario, Dr. Professor of Chemistry in the University of Rome. *Via di Villa Ada 10, Rome, Italy.*

1953 ‡Foster, Wilfred Raymond, B.Sc., M.S., Ph.D. *Lord Hall, Ohio State University, 124 W. 17th Avenue, Columbus 10, Ohio, U.S.A.*

1956 Franco, Rui Ribiero, Professor. *Faculdade de Filosofia, Ciencias, e Letras, Universidade de São Paulo, Caixa Postal 8105, São Paulo, S.P., Brazil.*

1948 Frankel, Jack Joseph, D.Sc., F.G.S. *Geological Dept., University of Natal, Durban, South Africa.*

1960 ‡Frank-Kamenetzky, Viktor Albertovich, Dozent. *Dept. of Crystallography, Geological Faculty, Leningrad University, Leningrad, U.S.S.R.*

1952 ‡Freeman, Ian Lindsay, B.Sc., F.G.S. *83 Goldington Avenue, Bedford.*

1956 ‡Freke, Anthony Marshall, B.Sc., A.R.I.C. *National Coal Board, West Midlands Division, Coal Survey Laboratory, 67 Wellington Rd., Edgbaston, Birmingham 15.*

1953 Friedman, Gerald Manfred, B.Sc., M.A., Ph.D., F.G.S. *Stanolind Oil and Gas Co., Stanolind Building, Tulsa, Oklahoma, U.S.A.*

1942 *Frondel, Clifford, Ph.D. Professor of Mineralogy, *Mineralogical Museum, Harvard University, Cambridge 38, Massachusetts, U.S.A.*

1961 ‡Frost, Malcolm Timothy, B.Sc. *Geology Dept., Manchester University, Manchester 13.*

1959 Frost, Michael Jack, B.Sc., Ph.D., F.G.A.A., F.G.S. *Dept. of Geology, University of Canterbury, Christchurch, New Zealand.*

1951 Frueh, Alfred Joseph, S.B., S.M., Ph.D. *McGill University, Montreal, Port Quebec, Canada.*

1956 ‡Fuller, Arthur Orpen, M.Sc. *Dept. of Geology, University of Cape Town, Rondesbosch, C.P., South Africa.*

1954 ‡Gallagher, Michael John, B.Sc. *Geological Survey of Great Britain, Atomic Energy Division, Young Street, Kensington, London W. 8.*

1948 ‡Gallitelli, Paolo, Professor. *Istituto di Mineralogia e Petrografia, Piazza S. Donato 1, Bologna, Italy.*

1956 Galopin, Raymond Edmond, D.Sc. Curator of Minerals and Petroleum, *Muséum d'Histoire Naturelle, Geneva, Switzerland.*

1937 Game, Philip Malcolm, B.Sc., F.R.G.S. *Old Bury Farm House, Ightham, Nr. Sevenoaks, Kent.*

1958 ‡Gard, John Alan, B.Sc., Ph.D., A.R.I.C. *14 Osborne Place, Aberdeen, Scotland.*

Year of Election

1960 Garnett, Richard Herbert Train, D.I.C., B.Sc., A.R.S.M., F.G.S. *Dept. of Mining Geology, Imperial College of Science and Technology, Prince Consort Road, London S.W. 7.*

1953 Garson, Magnus Sinclair, B.Sc., F.G.S. *c/o Geological Survey Dept., P.O. Box 27, Zomba, Nyasaland, Africa.*

1952 Gaskin, Alan Robert James, B.S., M.A. *Dept. of Geology, The University, Leeds 2.*

1947 ‡Gaskin, Arthur John, M.Sc. *C.S.I.R.O., D.I.C., P.O. Box 4331, Melbourne, Victoria, Australia.*

1953 Gay, Peter, M.A., Ph.D. *Dept. of Mineralogy and Petrology, Downing Place, Cambridge.*

1959 ‡Ghose, Subrata, B.Sc., M.Sc., M.S., Ph.D. *Mineralogical Institute, University of Bern, Sahlistraße 6, Bern, Switzerland.*

1959 Gifford, Antony Collen, B.Sc., A.R.C.S., F.G.S. *Featherstone Farm, Bunns Lane, Mill Hill, London N.W. 7.*

1960 ‡Gillott, Jack Edney, B.Sc., Ph.D., M.Sc. *Division of Building Research, National Research Council, Ottawa, Canada.*

1946 Gindy, Amin Riad, B.Sc., Ph.D., D.I.C., F.G.S. *27 Corniche (Block G), Chatby, Alexandria, Egypt.*

1958 ‡Gittins, John, M.Sc., Ph.D., F.G.S. *Dept. of Geological Sciences, University of Toronto, Toronto 5, Ontario, Canada.*

1953 ‡Glass, Herbert David, Ph.D. *Illinois State Geological Survey, Urbana, Illinois, U.S.A.*

1956 ‡Glasser, (Mrs.) Lesley Scott (*née* Dent). *Dept. of Chemistry, Aberdeen University, Aberdeen, Scotland.*

1951 Goldsmith, Julian Royce, Ph.D. *Dept. of Geology, University of Chicago, Chicago 37, Illinois, U.S.A.*

1952 ‡Goldsztaub, Stanislas. Professor of Mineralogy, University of Strasbourg. *1 rue Blessig, Strasbourg, France.*

1960 ‡Goni, Juan C., Professor of Mineralogy and Geochemistry. *Escola de Geologia, Universidade Rio Grande do Sul, Porto Alegre, Brazil.*

1954 ‡Gonzalez Garcia, Francisco, Dr., Professor. *Facultad de Ciencias, Universidad de Sevilla, Spain.*

1947 Goodman, Nordau Roslyn, M.Sc., D.Phil. *P.O. Box 320, New Glasgow, Nova Scotia, Canada.*

1954 ‡Goodyear, Jeffrey, B.Sc., Ph.D., A.Inst.P. *122 Hall Road, Hull, Yorkshire.*

1950 ‡Gordon, Robert Louis, B.Sc., Ph.D., F.Inst.P., A.M.I.E.E. *10 King Ecgbert Road, Totley Rise, Sheffield.*

1951 Gordon-Smith, John. *St. Patrick's Copper Mines, Avoca, Co. Wicklow, Eire.*

1949 Gorman, Donald Herbert, B.Sc. *Dept. of Geological Sciences, University of Toronto, Toronto 5, Canada.*

1946 *Gowing, Geoffrey Senior, M.A., F.R.I.C., F.G.S. '*Fieldhead*', *Rogerfield, Keswick, Cumberland.*

1913 *Graham, Richard Percival Devereux, Ph.D., B.A., D.Sc., F.R.S.C. Emeritus Professor of Mineralogy, McGill University. *775 Davaar Avenue, Outremont, Quebec, Canada.*

1952 ‡Green, Robert S., B.S. *18 South Jefferson Road, Mexico, Missouri, U.S.A.*

1958 ‡Greenberg, Seymour Samuel, B.S., A.M. *Virginia Division of Mineral Resources, Box 3667, University Station, Charlottesville, Virginia, U.S.A.*

Year of Election

1954 ‡Greene-Kelly, Ronald Gordon, B.Sc., Ph.D. *Pedology Dept., Rothamsted Experimental Station, Harpenden, Hertfordshire.*

1954 ‡Greenland, Dennis James, B.A. *Dept. of Agricultural Chemistry, Waite Agricultural Research Institute, Private Bag No. 1, Adelaide, South Australia.*

1950 ‡Gregg, Sidney John, Ph.D., A.R.C.S., F.R.I.C. *Washington Singer Laboratories, Prince of Wales Road, Exeter, Devon.*

1948 ‡Gregory, André George, B.Sc. *17 Southfield Road, Benton, Newcastle upon Tyne, Northumberland.*

1954 ‡Griffith, Charles Fitzroy, B.Sc., A.R.I.C. *Research Laboratory, Pilkington Bros. Ltd., St. Helens, Lancashire.*

1938 ‡Griffiths, John Cedric, M.Sc., Ph.D., F.G.S. Assistant Professor of Petrography, *Dept. of Earth Sciences, Pennsylvania State University, University Park, Pennsylvania, U.S.A.*

1947 ‡Grim, Ralph Early, Ph.D. Professor, *Dept. of Geology, University of Illinois, Urbana, Illinois, U.S.A.*

1961 Gross, Eugene Bischoff, B.A., M.S. *Dept. of Geology and Mineralogy, University of Michigan, Ann Arbor, Michigan, U.S.A.*

1945 *Gübelin, Edward Joseph, D.Phil. *1 Schweizerhofquai, Lucerne, Switzerland.*

1957 Guillemin, Claude Jean Guy, Dr.Sc.Nat., Dr.Pharm. Chef du Groupe-laboratoire, *B.R.G.G.M., 74 Rue de la Fédération, Paris 15e.*

1947 ‡*Gutierrez Rios, Enrique. *Consejo Superior de Investigaciones Científicas, Serrano 121, Madrid, Spain.*

1947 Hacquaert, Armand, D.Sc. Professor of Mineralogy, *State University, Rozier 6, Ghent, Belgium.*

1958 ‡Halferdahl, Laurence Bowes, B.Sc., M.Sc. *Research Council of Alberta, 87th Avenue and 114th Street, Edmonton, Alberta, Canada.*

1961 Hall, Anthony, B.Sc. *24 Nevern Mansions, Warwick Road, London S.W. 5.*

1912 ‡*Hallimond, Arthur Francis, M.A., Sc.D., F.G.S. *75 Corringham Road, Golders Green, London N.W. 11.*

1961 ‡Hamad, Sa'ad el Din, B.Sc. *Geological Survey Dept., P.O. Box 410, Khartoum, The Republic of the Sudan.*

1951 ‡Hamdi, Hassan Mahmoud, D.Sc., B.Sc. Professor, *Soil Science Division, Faculty of Agriculture, Ain-Shams University, Cairo, Egypt.*

1960 ‡Hamilton, John David Gavin, B.Sc. *Dept. of Geology and Geophysics, University of Sydney, Sydney, New South Wales, Australia.*

1951 ‡Hammer, Averill John, B.S., M.S., Ph.D. Professor of Chemistry, *Bowling Green State University, Bowling Green, Ohio, U.S.A.*

1958 ‡Harbord, Norman Henry, B.Sc. *The United Steel Companies Ltd., Swinden Laboratories, Moorgate, Rotherham, Yorkshire.*

1947 ‡Haresnape, John Norman, M.Sc., Ph.D. *The Firs, Church Road, Sunningdale, Berkshire.*

1950 Harker, Robert Ian, B.A. *Johns-Manville Research Center, Manville, New Jersey, U.S.A.*

1955 Harrington, Hilary James, Ph.D., M.Sc. *Geology Dept., University of New England, Armidale, New South Wales, Australia.*

1950 ‡Harris, Peter Graham, M.Sc., Ph.D. *Dept. of Geology, The University, Leeds 2.*

1937 *Harrison, John Vernon, M.A., D.Sc., F.R.S.E., F.G.S. *Dept. of Geology and Mineralogy, University Museum, Oxford.*

1955 Harrison, Ronald Keith, B.Sc., F.G.S. *Geological Survey of Great Britain, Atomic Energy Division, Young Street, Kensington, London W. 8.*

Year of Election

1950 Harry, William Trevelyan, B.Sc. *Dept. of Geology, The University, St. Andrews, Fife, Scotland.*

1931 ‡Hart, Robert, B.Sc., Ph.D. *Macaulay Institute for Soil Research, Craigiebuckler, Aberdeen.*

1900 *Hartley, Sir Harold Brewer, Kt., C.B.E., M.C., M.A., D.Sc., D.C.L., F.R.S. *The Manor House, Middleton-on-Sea, Nr. Bognor Regis, Sussex.*

1948 Hartley, Jack, B.Sc., F.G.S. *Dept. of Geology, The University, Leeds 2.*

1959 Harvey, Jill Raymonde, B.Sc. *Royal School of Mines, Prince Consort Road, London S.W. 7.*

1917 ‡Harwood, Henry Francis, M.Sc., Ph.D., F.R.I.C., F.G.S. *'Erlesdene', Gannock Park, Deganwy, Llandudno Junction, Caernarvonshire.*

1947 ‡Hast, Nils Bernhard, Professor. *Engelbrektsgatan 16, Stockholm, Sweden.*

1954 ‡Hathaway, John Cummins, A.B., M.S. *Geochemistry and Petrology Branch, U.S. Geological Survey, Building 25, Federal Center, Denver, Colorado, U.S.A.*

1921 ‡*Hawkes, Leonard, D.Sc., F.R.S. Emeritus Professor of Geology, University of London. *26 Moor Lane, Rickmansworth, Hertfordshire.*

1960 ‡Heckroodt, Renier Oelof, M.Sc. *National Chemical Research Laboratory, C.S.I.R., P.O. Box 395, Pretoria, South Africa.*

1957 Heier, Knut Sigurdsön. *Dept. of Geology, The Rice Institute, Houston, Texas, U.S.A.*

1957 Heinrich, Eberhardt William, B.S., M.S., Ph.D., Professor. *Dept. of Mineralogy, University of Michigan, Ann Arbor, Michigan, U.S.A.*

1956 ‡Heller, Liselotte, B.A., Ph.D. *103 Bialik Street, Ramat Gan, Israel.*

1961 Henderson, Christopher Michael Bradford, B.Sc. *Geology Dept., Royal School of Mines, Imperial College of Science and Technology, Prince Consort Road, London S.W. 7.*

1958 ‡Henderson, Donald Munro, A.B., A.M., Ph.D., Professor. *Dept. of Geology, University of Illinois, Urbana, Illinois, U.S.A.*

1936 ‡Henry, Norman Fordyce McKerron, B.Sc., M.A., Ph.D., F.G.S. *Dept. of Mineralogy and Petrology, Downing Place, Cambridge.*

1952 ‡Herson, Sydney, A.M.I.Struct.E. *Hill Rise, 68 Manchester Road, Wilmslow, Cheshire.*

1950 Hess, Harry Hammond, B.S., M.A., Ph.D. *Geology Dept., Princeton University, Princeton, New Jersey, U.S.A.*

1929 Hey, Max Hutchinson, M.A., D.Sc. *Dept. of Mineralogy, British Museum (Natural History), Cromwell Road, London S.W. 7.*

1960 ‡Heystek, Hendrik, D.Sc. *2628 Hollister Terrace, Glendale 6, California, U.S.A.*

1958 ‡Hicks, Bruce Clifford, M.Sc. *22 Tycehurst Hill, Loughton, Essex.*

1957 Hildebrand, Fred A. *9250 Village Parkway, Denver 15, Colorado, U.S.A.*

1946 Hill, Hamilton Stanton, B.A., M.A. *Dept. of Geology, Pasadena City College, Pasadena 4, California, U.S.A.*

1957 ‡Hill, Vincent George, M.S., Ph.D. *22 Burbank Avenue, Kingston, Jamaica, West Indies.*

1944 ‡Hilliard, Alfred, M.Inst.F., F.G.S. *Gresham Lodge, 62 Water Lane, London S.W. 2.*

1960 ‡Hills, Archie Chalmers, B.Sc. *Geology Dept., University College, Gower Street, London W.C. 1.*

1960 ‡Hirst, David Michael, B.Sc., Ph.D. *Geology Dept., Science Laboratories, University of Durham, South Road, Durham.*

Year of Election

1927 Hitchen, Charles Stansfield, M.B.E., B.Sc., Ph.D., A.R.C.S., D.I.C., M.I.M.M., F.G.S. *147 Gloucester Road, South Kensington, London S.W. 7.*

1953 ‡Hitchon, Brian, B.Sc., Ph.D., F.G.S. *Petroleum Geochemistry Section, Research Council of Alberta, 87th Avenue and 114th Street, Edmonton, Alberta, Canada.*

1945 Hla, Tha, B.Sc., Ph.D., D.I.C., A.R.I.C., F.G.S. *Dept. of Geology, University College, Rangoon, Burma.*

1946 Hocart, Raymond. Professor of Mineralogy, *Laboratoire de Minéralogie à la Sorbonne, 1 rue Victor Cousin, Paris V, France.*

1955 ‡Hodgson, Alan Algarth, B.Sc., A.R.I.C. *21 Sycamore Avenue, Upminster, Essex.*

1950 ‡Holdridge, Douglas Arthur, B.Sc., A.R.C.S., D.I.C., F.R.I.C. *26 Watlands Avenue, Wolstanton, Newcastle-under-Lyme, Staffordshire.*

1939 Holgate, Norman, M.Sc., Ph.D., F.G.S. *Dept. of Geology, The University, Glasgow W. 2.*

1929 Hollingworth, Sydney Ewart, M.A., D.Sc., F.G.S. Professor of Geology, *University College, Gower Street, London W.C. 1.*

1914 *Holmes, Arthur, D.Sc., D.I.C., A.R.C.S., F.R.S. Emeritus Professor of Geology. *Flat 6, 20 St. John's Avenue, Putney, London S.W. 15.*

1948 Holmes, Ralph Jerome. Professor of Mineralogy, *Columbia University, New York 27, N.Y., U.S.A.*

1949 *Hooker, (Miss) Marjorie, B.A., M.A. *U.S. Geological Survey, Washington 25, D.C., U.S.A.*

1925 *Horn, Aubrey Evelyn, A.O.S.M. *28 Heatherlea Road, Southbourne, Bournemouth, Hampshire.*

1948 ‡Horne, John Ewen Troup, M.A., F.G.S. *Geological Survey of Great Britain, Atomic Energy Division, Young Street, Kensington, London W. 8.*

1955 ‡Hosking, Kenneth Frederick Gordon, M.Sc., Ph.D., A.M.I.M.M. *'Glanmire', Basset Street, Camborne, Cornwall.*

1959 ‡Hosterman, John Wallace, B.S., M.S. *U.S. Geological Survey Agriculture Research Center, Beltsville, Maryland, U.S.A.*

1950 ‡Howie, Robert Andrew, M.A., Ph.D., F.G.S. *Dept. of Geology, The University, Manchester 13.*

1928 Howling, Gerald Edward, B.Sc. *'Cobs Hatch', Greenhurst Lane, Oxted, Surrey.*

1947 ‡*Hoyos de Castro, Angel. *Faculdad de Farmacia, University of Granada, Spain.*

1956 Hughes, Charles James, M.A., D.Phil., F.G.S. *50 Mill Lane, Wallasey, Cheshire.*

1959 Hughson, Michael Rossiter, B.Sc. *60 Norice Street, Ottawa 5, Ontario, Canada.*

1950 ‡Hügi, Theodor, D.Ph. *Dept. of Mineralogy and Petrology, The University, Sahlistraße 6, Bern, Switzerland.*

1960 ‡Hunt, John Prior, Ph.D. *Andes Copper Mining Co., El Salvador, Potrerillos, Chile, South America.*

1939 Hurlbut, Cornelius Searle, Jr., M.A., Ph.D. Associate Professor of Mineralogy, *Harvard University, Cambridge 38, Massachusetts, U.S.A.*

1959 ‡Hutchison, Charles Strachan, B.Sc., F.G.S. *Dept. of Geology, University of Malaya in Kuala Lumpur, Pantai Valley, Kuala Lumpur, Malaya.*

1936 Hutton, Colin Osborne, M.Sc., Ph.D., F.R.S.N.Z., F.G.S. Professor of Mineralogy, *School of Mineral Sciences, Stanford University, Palo Alto, California, U.S.A.*

Year of Election

1958 Hytönen, Kai Kalevi Gabriel. *Geological Survey, Otaniemi, Finland.*

1936 Illing, Vincent Charles, M.A., M.I.M.M., F.R.S. Professor of Geology (Oil Technology), Imperial College of Science and Technology. *24 The Avenue, Cheam, Surrey.*

1947 ‡*Ingerson, Earl, A.B., A.M., Ph.D., Sc.D. *Dept. of Geology, University of Texas, Austin 12, Texas, U.S.A.*

1947 Iyengar, Sosale Venkatanarasimha Parthasarathy, D.Sc., F.G.S. *Geological Survey of India, 27 Chowringhee Road, Calcutta 13, India.*

1935 Jackson, Henry Stanley Lawies, B.A. *80 Melton Court, London S.W. 7.*

1950 Jaffe, Howard William, B.A. *327 Oakland Avenue, Monroe, New York, U.S.A.*

1958 ‡Jäger, Emilie, Dr. *Mineralogisches Institut, Sahlistraße 6, Bern, Switzerland.*

1954 ‡Jasmund, Karl, Ph.D. *Mineralogisch-petrographisches Institut der Universität Köln, Zülpicher Straße 47, Köln, Germany.*

1951 Jefferies, Charles Davis, B.S., M.S., Ph.D. Professor, *Agronomy Dept., Pennsylvania State University, University Park, Pennsylvania, U.S.A.*

1947 ‡Jeffery, James William, B.A., Ph.D., F.Inst.P. *7 Pearfield Road, London S.E. 23.*

1961 Jefford, Godfrey, M.Sc., B.Sc., D.I.C. *Geological Survey, Kaduna South, Northern Nigeria, West Africa.*

1962 Jenni, Clarence Marvin, *104 Swallow Hall, University of Missouri, Columbia, Missouri, U.S.A.*

1947 ‡Jensen, Aksel Tovborg, B.Sc. *Landbohöjskolens Kemiske Laboratorium, Bulowsvej 13, Copenhagen V, Denmark.*

1950 Jensen, David Edward, A.B., M.S., F.R.A.S. *199 East Brook Road, Pittsford, N.Y., U.S.A.*

1938 Jhingran, Anant Gopal, M.Sc., Ph.D. *Geological Survey of India, Ali Manzil, Wala Qada Road, Lucknow, India.*

1950 Jobbins, Edward Alan, B.Sc., F.G.S. *Geological Survey and Museum, Exhibition Road, London S.W. 7.*

1950 Joel, Nahun, Professor. *Centro de Investigaciones de Cristalografia, Facultad de Ciencias Fisicas y Matematicas, Universidad de Chile, Casilla 2777, Santiago, Chile.*

1951 ‡Johns, William Davis, A.B. Professor. *Dept. of Geology, Washington University, St. Louis 30, Missouri, U.S.A.*

1955 ‡Johnson, George Anthony Lobjoit, B.Sc., Ph.D., F.G.S. *Dept. of Geology, Science Laboratories, South Road, Durham.*

1954 ‡Jonas, Edward Charles, B.S., M.S. *Dept. of Geology, The University of Texas, Austin 12, Texas, U.S.A.*

1953 ‡Jones, Gordon Kenneth, B.Sc. *Fuller's Earth Union Ltd., Patteson Court, Nutfield Road, Redhill, Surrey.*

1958 ‡Jones, John Brett, B.Sc., Ph.D. *Geology Dept., The University, Adelaide, South Australia.*

1961 Jones, Meurig Powell, B.Sc., D.I.C., F.G.S., A.M.I.M.M., A.M.A.I.M.E. *Mineral Technology Dept., Royal School of Mines, Imperial College of Science and Technology, Prince Consort Road, London S.W. 7.*

1908 *Jones, Owen Thomas, M.A., D.Sc., F.R.S. Formerly Woodwardian Professor of Geology, Cambridge. *73 Barton Road, Cambridge.*

1930 Jones, William Richard, C.B.E., D.Sc., D.I.C., M.I.M.M., F.G.S. *64 Gerard Road, Barnes, London S.W. 13.*

1936 Joplin, (Miss) Germaine Anne, D.Sc., Ph.D., B.A. *Dept. of Geophysics, Australian National University, Box 4, G.P.O., Canberra, Australia.*

Year of Election

1948 JOYCE, John Raymund Foggan, Ph.D., B.Sc., F.G.S., A.I.M.M. *'Hartford Cottage', Stokenchurch, High Wycombe, Buckinghamshire.*

1956 ‡KAIMAN, Solomon, B.A., M.A. *Mines Branch, 552 Booth Street, Ottawa, Canada.*

1958 ‡KASHKAY, Mir-Ali, Dr. Professor. *Ap. N6, Azizi Cekov Street N.8, Baku, U.S.S.R.*

1959 ‡KEELING, Philip Stanley, A.R.S.M., B.Sc., F.G.S. *69 Albany Road, Harpfields, Stoke-on-Trent.*

1948 ‡KELLER, Walter David, Ph.D., Professor. *203 Swallow Hall, University of Missouri, Columbia, Missouri, U.S.A.*

1954 KELSEY, (Miss) Christian Hilary, B.A. *Dept. of Mineralogy and Petrology, Downing Place, Cambridge.*

1955 KEMPSTER, Charles John Edgar, B.A., Ph.D. *Physics Dept., University of Adelaide, Adelaide, South Australia.*

1954 KENNEDY, Nigel Wilson, F.R.S.A. *'Foxcovert', Lower Bebington, Cheshire.*

1929 KENNEDY, William Quarrier, D.Sc., Ph.D., F.R.S. Professor of Geology, *The University, Leeds 2.*

1938 KERR, Paul Francis, Ph.D. Professor of Mineralogy, *Columbia University, New York 27, U.S.A.*

1951 KILPADY, Sripadrao, M.Sc., F.G.S. Professor, *Dept. of Geology, Nagpur University, Nagpur, India.*

1949 KING, Basil Charles, D.Sc., Ph.D., F.R.S.E., F.G.S. Professor of Geology, *Bedford College, Regent's Park, London N.W. 1.*

1948 KING, Robert Joseph. *7 Lodge Farm Road, Uppingham Road, Leicester.*

1938 KINGSBURY, Arthur William Gerald, F.G.S. *'Drake House', Hinksey Hill, Oxford.*

1962 KLEMM, Dietrich Dankwart, Dr. *Institut für allgemeine und angew. Geologie und Mineralogie, Luisenstraße 37, München 2, Germany.*

1958 ‡KNILL, (Mrs.) Diane Constance, B.Sc., Ph.D., D.I.C., F.G.S. *49 Manor Way, Petts Wood, Orpington, Kent.*

1950 KNORRING, Oleg von, M.Sc., Ph.D. *Research Institute of African Geology, The University, Leeds 2.*

1952 ‡KOARK, Hans Joachim, Ph.D. *Geological Institute, Uppsala, Sweden.*

1951 KOEN, Gerhardus Meissner, D.Sc. *Anglo-American Corporation of South Africa Ltd., P.O. Box 106, Crown Mines, Johannesburg, Transvaal, South Africa.*

1955 ‡KONTA, Jiří, R.N.Dr. *Institute of Petrology, Karlovy University, Albertov 6, Praha II, Czechoslovakia.*

1956 ‡KOSTER, Heinrich Martin, Dr. *Staatliches Forschungsinstitut für angewandte Mineralogie, Dörnsberg-Palais, Regensburg, Germany.*

1945 *KOSTOV, Ivan, D.I.C., F.G.S. Professor, *Mineralogical and Petrological Institute, University of Sofia, Bulgaria.*

1926 *KRISHNAN, Maharajapuram Sitaram, M.A., Ph.D., A.R.C.S., D.I.C., F.G.S. Director, *Central Board of Geophysics, Osmania University Campus, Hyderabad 7, A.P., India.*

1954 KULLERUD, Gunnar, Ph.D. *Carnegie Institute of Washington, Geophysical Laboratory, 2801 Upton Street, Washington, D.C., U.S.A.*

1952 KUNO, Hisashi, D.Sc. *Geological Institute, Tokyo University, Tokyo, Japan.*

1953 ‡KUNZE, George William, B.S., M.S., Ph.D. *Dept. of Agronomy, Texas A. & M. College, College Station, Texas, U.S.A.*

Year of Election

1950 Kuo, Tsung Shan, B.A. *Geological Institute, Ministry of Geology, Ban Wan Chuang, West of Fu-chen-Men, Peking, China.*

1947 Kutina, Jan, Sc.Dr. *Mineralogical Dept., Karlovy University, Albertov 6, Praha II, Czechoslovakia.*

1949 Lacy, Ernest David, B.Sc., A.R.C.S., F.G.S. *Dept. of Geology, The University, Edgbaston, Birmingham 15.*

1953 ‡Lambe, Thomas William, B.C.E., S.M., Sc.D. *Room 1–339, Massachusetts Institute of Technology, Cambridge, Massachusetts, U.S.A.*

1957 Lambert, Richard St. John, B.A., Ph.D. *Dept. of Geology and Mineralogy, University Museum, Oxford.*

1947 ‡Lange, Jacob Johan de, F.Inst.P. *B.P.M. Laboratory, Royal Dutch Shell Group, 3 Badhuisweg, Amsterdam-N, Holland.*

1961 ‡Lapa, António Yosé Rebôlho, Cicenciatura em Ciencias Geologicas. *Laboratório de Mineralogia, Faculdade de Ciencias, Porto, Portugal.*

1961 ‡Lappin, Michael Anthony, B.Sc. *Geology Dept., King's College, Newcastle upon Tyne.*

1951 ‡Layton, William, B.Sc., F.G.S. *23 Coverdale Road, Fairfield, Co. Durham.*

1958 ‡Lazarenko, Evgen Constantinovich, Dr. Professor. *University of Lvov, Ukrainian S.S.R.*

1958 Leake, Bernard Elgey, B.Sc., Ph.D., F.G.S. *Geology Dept., The University, Bristol 8.*

1953 ‡Le Bas, Michael John, B.Sc. *Dept. of Geology, University of Leicester, Leicester.*

1954 Lehmann, Emil, D.Sc. *Partnachstraße 44, Garmisch-Partenkirchen, Germany.*

1958 Le Maitre, Roger Walter, B.A., F.G.S. *Dept. of Mineralogy, British Museum (Natural History), Cromwell Road, London S.W. 7.*

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1949 ‡Letort, Yves. *3 Avenue Paul Doumer, Paris XVI^{e}, France.*

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1952 ‡Light, Mitchell A., A.B., A.M., Ph.D. *15414 East Midcrest Drive, Whittin, California, U.S.A.*

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1947 Lindberg, (Mrs.) Marie Louise, A.B., A.M. *United States Geological Survey, Washington 25, D.C., U.S.A.*

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1960 Long, James Victor Percival, M.A., Ph.D., A.Inst.P. *44 Woollards Lane, Great Shelford, Cambridge.*

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1943 Lonsdale, (Dame) Kathleen, D.B.E., D.Sc., F.R.S. Professor of Chemistry, University College, London. *121 Station Road, West Drayton, Middlesex.*

1945 ‡Loupekine, Igor Serge, B.Sc., Ph.D., F.G.S. Professor. *Geology Dept., Royal College, P.O. Private Bag, Nairobi, Kenya.*

1958 Lovering, (Mrs.) Jennifer Kerry, B.Sc., M.A. *127 Buxton Street, Deakin, A.C.T., Australia.*

Year of Election

1946 ‡*Macewan, Douglas Maclean Clark, M.A., B.Sc., Ph.D., A.Inst.P. *Carnegie Laboratory of Physics, Queen's College, University of St. Andrews, Dundee.*

1929 Macgregor, Archibald Gordon, M.C., D.Sc., F.R.S.E., F.G.S. *45 Thorburn Road, Colinton, Edinburgh 13.*

1929 Macgregor, Murray, M.A., D.Sc., F.R.S.E., F.G.S. Formerly Assistant Director, *Geological Survey of Great Britain (Scottish Office), 53 Glencairn Drive, Glasgow S. 1.*

1960 ‡Mackay, Alan Lindsay, M.A., Ph.D., F.Inst.P. *22 Lanchester Road, Highgate, London N. 6.*

1947 ‡Mackenzie, Robert Cameron, D.Sc., Ph.D., F.R.I.C. *Macaulay Institute for Soil Research, Craigiebuckler, Aberdeen.*

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1961 ‡Macleod, Donald Angus, B.Sc. *School of Agriculture, The University, Cambridge.*

1961 Macpherson, Harry Gordon, B.Sc., M.A., Ph.D. *Geology Dept., Royal Scottish Museum, Edinburgh 1.*

1950 McAndrew, John, Ph.D. *Mineragraphic Investigations, C.S.I.R.O., Geology Dept., University of Melbourne, Parkville N. 2, Victoria, Australia.*

1951 ‡McCaleb, Stanley Bert, B.S., M.S., Ph.D. *Sun Oil Co., 503 North Central Expressway, Richardson, Texas, U.S.A.*

1945 ‡McConnell, Duncan, Ph.D. Research Professor, *College of Dentistry, Ohio State University, Columbus 10, Ohio, U.S.A.*

1954 ‡McConnell, James Desmond Caldwell, M.Sc., M.A., Ph.D. *Dept. of Mineralogy and Petrology, Downing Place, Cambridge.*

1960 ‡McDowell, Leslie L., B.S., M.S., *P.O. Box 158, Sedimentation Laboratory, University of Mississippi, U.S.A.*

1955 ‡McKie, Duncan, B.Sc., B.A., A.R.I.C., F.G.S. *Dept. of Mineralogy and Petrology, Downing Place, Cambridge.*

1950 McLachlan, Geoffrey Roy, M.Sc. *The Museum, Port Elizabeth, South Africa.*

1949 McLaughlin, Robert Joseph William, M.Sc., Ph.D. *Dept. of Geology and Mineralogy, University of Melbourne, Carlton N. 3, Melbourne, Victoria, Australia.*

1959 ‡Mailloux, Auguste, B.S.A., L.Sc., Professor. *Faculté d'Agriculture, Ste.-Anne-de-la-Pocatière, Kamouraska, Port Quebec, Canada.*

1958 Majumdar, Amal, Ph.D. *Chemistry Division, Building Research Station, Garston, Watford, Hertfordshire.*

1955 ‡Maksimović, Zoran. *Laboratory of Mineralogy and Petrology, Dobracina 16, Belgrade, Yugoslavia.*

1960 Mandarino, Joseph Anthony, B.S., M.S., Ph.D. *Earth Sciences Division, Royal Ontario Museum, 100 Queen's Park, Toronto 5, Ontario, Canada.*

1950 ‡Marel, Herman Willem van der. *Edese weg 90–I, Bennekom, Netherlands.*

1950 ‡Marshall, Charles Edmund, M.Sc., Ph.D. Professor, *Dept. of Soils, College of Agriculture, University of Missouri, Columbia, Missouri, U.S.A.*

1961 Marshall, John Kenneth, B.Sc., F.G.S. *Bonanza, 1 Eastbourne Close, St. Austell, Cornwall.*

1957 ‡Martin-Vivaldi, Juan Luis, Dr. en Ciencias. *Estación Experimental del Zaidin, Avenida de Cervantes, Granada, Spain.*

1943 ‡*Mason, Brian Harold, M.Sc., Ph.D. Curator of Physical Geology and Mineralogy, *American Museum of Natural History, New York 24, N.Y., U.S.A.*

Year of Election

1957 Mather, (Mrs.) Katharine Selden Kniskern, A.B., A.I.M.E. *P.O. Drawer 2131, Jackson, Mississippi, U.S.A.*

1947 ‡*Mathias, (Mrs.) Morna, M.A., Ph.D. *Dept. of Geology, University of Cape Town, Rondebosch, Cape Province, South Africa.*

1938 Meen, Victor Ben, M.A., Ph.D. Associate Professor, Dept. of Geological Sciences, University of Toronto; and Director of the *Royal Ontario Museum, Earth Sciences Division, 100 Queen's Park, Toronto 5, Ontario, Canada.*

1947 ‡Megaw, (Miss) Helen Dick, M.A., Ph.D., F.Inst.P. *Girton College, Cambridge.*

1919 *Melmore, Sidney, B.Sc. *61 Carr Lane, Acomb, York.*

1950 ‡Méring, Jacques, *12 Quai Henri IV, Paris IV^e^, France.*

1959 Merrill, Ralph E., A.B. *746 Cragmont Avenue, Berkeley 8, California, U.S.A.*

1956 ‡Meyer, Jurg Walter. *Johns-Manville Research Center, Manville, New Jersey, U.S.A.*

1946 ‡Midgley, Henry George, M.Sc., Ph.D., F.G.S. *Building Research Station, Garston, Watford, Hertfordshire.*

1951 Mikami, Harry M., B.S., M.S., Ph.D. *P.O. Box 29, Norristown, Pennsylvania, U.S.A.*

1949 Milledge, (Mrs.) Hylton Judith (*née* Grenville-Wells), M.Sc., Ph.D. *Dept. of Chemistry, University College, Gower Street, London W.C. 1.*

1947 Millman, Anthony Philip, Ph.D., D.I.C., A.R.S.M., B.Sc., F.G.S. Reader in Economic Geology, *Imperial College of Science and Technology, London S.W.7.*

1949 ‡Milne, (Miss) Angela Alice, B.Sc. *University Women's College, University of Melbourne, College Crescent, Parkville N. 2, Victoria, Australia.*

1949 ‡Mitchell, Bruce Duff, B.Sc. *Macaulay Institute for Soil Research, Craigiebuckler, Aberdeen.*

1960 ‡Mitchell, Dennis. *'Sidesway', Old Totnes Road, Newton Abbot, Devon.*

1948 Mitchell, Ronald Keith. *21 Bark Hart Road, Orpington, Kent.*

1948 ‡Mitchell, William Anderson, B.Sc. *Macaulay Institute for Soil Research, Craigiebuckler, Aberdeen.*

1962 ‡Moll, William Francis, B.S., M.A. *Geology Dept., Washington University, St. Louis 30, Missouri, U.S.A.*

1937 Montgomery, Arthur, Ph.D. *277 Park Avenue, New York 17, N.Y., U.S.A.*

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1959 Moreau, Jules François Jean Marie, M.A. *14 Rue Van Benedin, Louvain, Belgium.*

1950 Morel, Stephen William, B.Sc., F.G.S. *67 The Rise, Sevenoaks, Kent.*

1960 ‡Morelli, Gian Luca, Dr.Chem. *Via E. Fermi 4 A, S. Donato Milanese, Milan, Italy.*

1956 Morgan, William Richard, B.Sc., M.Sc., F.G.S. *c/o The Bureau of Mineral Resources, Geology and Geophysics, Canberra, A.C.T., Australia.*

1952 Morley, Russell Alvin Elbridge, M.S. *399 North 18th Street, Salem, Oregon, U.S.A.*

1954 Moss, Alfred Allinson, B.Sc., Ph.D., F.S.A. *Dept. of Mineralogy, British Museum (Natural History), Cromwell Road, London S.W. 7.*

1922 *Mountain, Edgar Donald, M.A., D.Sc. Professor of Geology, *Rhodes University, Grahamstown, South Africa.*

1932 *Mourant, Arthur Ernest, B.M., B.Ch., M.A., D.Phil., F.G.S. *c/o Lister Institute of Preventive Medicine, Chelsea Bridge Road, London S.W. 1.*

Year of Election

1954 Mrose, (Miss) Mary Emma, B.S.Ed., M.A. *Geochemistry and Petrology Branch, U.S. Geological Survey, Washington 25, D.C., U.S.A.*

1948 ‡Mueller, George, M.A., B.Sc., Ph.D. Professor, *Escuela de Ingeniería Química, Casilla 783, Concepción, Chile.*

1947 ‡Muir, Alexander, B.Sc., Ph.D. *Rothamsted Experimental Station, Harpenden, Hertfordshire.*

1949 Muir, Ian Douglas, B.A., Ph.D., F.G.S. *17 Eachard Road, Cambridge.*

1950 ‡*Muñoz Taboadela, Manuel, Dr. Professor of Applied Geology, *University of Santiago de Compostela, Spain.*

1944 Murata, Kiguma Jack, B.S. *United States Geological Survey, 345 Middlefield Road, Menlo Park, California, U.S.A.*

1959 Murchison, Duncan George, B.Sc., Ph.D., F.G.S. *Geology Dept., King's College, Newcastle upon Tyne.*

1951 ‡Murray, Haydn Herbert, B.S., M.S., Ph.D. *Research Division, Georgia Kaolin Co., 433 North Broad Street, Elizabeth, New Jersey, U.S.A.*

1961 ‡Mutis-Duplat, Emilio, Assistant Professor of Geology. *1850 Arch Street, Berkeley 9, California, U.S.A.*

1938 ‡Nagelschmidt, Gunther, D.Ph., F.G.S. *Barnfield House, Hathersage, Nr. Sheffield.*

1939 Nakahira, Mitsuoki, D.Sc. *1157 Zoshigaya-6-chome, Toshima-ku, Tokyo, Japan.*

1961 Nash, Roy Anthony, B.Sc., A.R.S.M. *60 Moor Lane, North Hykeham, Lincolnshire.*

1949 Nashar, (Mrs.) A. S. El, B.Sc., Ph.D. (*née* Beryl Scott), *23 Morris Street, Mayfield West, New South Wales, Australia.*

1960 ‡Neglia, Stefano, Dr.Chem. *Via Bordolano 3 B, S. Donato, Milan, Italy.*

1945 ‡Nel, Hans Jurie, M.Sc., D.Sc. *Geological Dept., American Corporation of South Africa, Ltd., P.O. Box 4587, Johannesburg, South Africa.*

1945 ‡Nelson, James Bowman, Ph.D. *10 Belsize Lane, Hampstead, London N.W. 3.*

1947 ‡Neumann, (Mrs.) Barbara Susan, Ph.D. (*née* Emödi). *Patteson Court, Nutfield Road, Redhill, Surrey.*

1947 *Neumann, Henrich, D.Phil. *Mineralogisk-Geologisk Museum, Trondhjemveien 23, Oslo 45, Norway.*

1949 ‡Nicholls, Geoffrey Dennis, B.A., Ph.D., F.G.S. *Dept. of Geology, The University, Manchester 13.*

1957 ‡Nicholson, Charles Geoffrey, A.Met., F.I.M., F.G.S. *7 Castlewood Road, Fulwood, Sheffield 10.*

1959 Nickel, Ernest Henry, B.Sc., M.Sc., Ph.D. *Mines Branch, 555 Booth Street, Ottawa, Canada.*

1961 ‡Nicol, Alastair William, B.Sc. *Chemistry Dept., University of Aberdeen, Meston Walk, Old Aberdeen.*

1950 ‡Nicolaysen, Louis Otto, B.Sc. *Bernard Price Institute of Geophysical Research, University of the Witwatersrand, Milner Park, Johannesburg, South Africa.*

1945 ‡Nixon, Harold Leslie, M.A. *Rothamsted Experimental Station, Harpenden, Hertfordshire.*

1933 Nockolds, Stephen Robert, B.Sc., Ph.D., F.G.S. *Dept. of Mineralogy and Petrology, Downing Place, Cambridge.*

1951 ‡Norin, Rolf, Ph.D. *Högansbolaget, Högans, Sweden.*

1950 ‡Norrish, Keith, M.Sc., A.Inst.P. *Division of Soils, Commonwealth Scientific and Industrial Research Organization, Adelaide, South Australia.*

Year of Election

1956 ‡Norstrand, Robert Alexander van, M.S. *836 Park Drive, Flossmoor, Illinois, U.S.A.*

1955 ‡Nowacki, Werner, Dr., Professor. *Tulpenweg 6, Bern 4, Switzerland.*

1942 Nuffield, Edward Wilfrid, B.A., Ph.D. *Dept. of Geological Sciences, University of Toronto, Toronto 5, Canada.*

1948 ‡Nurse, Ronald Walter Brown, D.Sc., F.Inst.P. *Building Research Station, Garston, Watford, Hertfordshire.*

1946 O'Brien, Murrogh Vere, B.A. *Woodtown Park, Rathfarnham, Co. Dublin, Eire.*

1956 Oftedal, Ivan Werner, Professor, Dr. Phil. *Universitetets Mineralogiske Institutt, Blindern, Oslo, Norway.*

1958 O'Hara, Michael John. *Grant Institute of Geology, King's Buildings, West Mains Road, Edinburgh.*

1920 *Ohashi, Ryöichi, Emeritus Professor of Geology and Mineralogy. *40 Hodono Suwa Machi, Akita, Japan.*

1950 Oliver, Robin Langford, M.Sc., F.G.S., F.R.G.S *c/o Geology Dept., Adelaide University, South Australia.*

1959 Omori, Keiichi, Dr.Sci. Professor of Mineralogy, *Institute of Mineralogy, Tohoku University, Sendai, Japan.*

1960 Oppenheim, Michael Jerrold, B.Sc., Ph.D. *Dept. of Geology, Hebrew University, Jerusalem, Israel.*

1954 ‡Ormsby, Walter Clayton, B.S., M.S. *United States Dept. of Commerce, National Bureau of Standards, Washington 5, D.C., U.S.A.*

1958 Orr, David Blair, B.Sc. *c/o Geological Dept., C.D.M., Orangemund, South-West Africa.*

1951 ‡Osborn, Elburt Franklin, B.S., M.S., Ph.D. *203 Old Main, Pennsylvania State University, University Park, Pennsylvania, U.S.A.*

1941 Osborn, George Howard, A.R.I.C., A.I.M.M. *Cherry Tree Cottage, Merley Ways, Nr. Wimborne, Dorset.*

1960 Ottley, Derek John, B.Sc., A.R.S.M., A.M.I.M.M., M.A.I.M.E. *Royal School of Mines, London S.W. 7.*

1957 Oyawoye, Mosobalaje Olaloye, B.Sc. *The University College, Ibadan, Nigeria.*

1951 ‡Pabst, Adolf, Ph.D. Professor of Mineralogy, *Dept. of Geological Sciences, University of California, Berkeley 4, California, U.S.A.*

1957 Paděra, Karel, Dr. Docent Min. *Dept. of Geochemistry, Mineralogy, and Crystallography, Charles University, Albertov 6, Praha II, Czechoslovakia.*

1950 Pantin, Henry Moir, B.A. *New Zealand Oceanographic Institute, 177 Thondon Qy., Wellington, New Zealand.*

1922 *Parker, Robert Luling, Ph.D. Professor, *Mineralogical Institute, Sonneggstraße 5, Zürich 6, Switzerland.*

1947 ‡Parker, Thomas Webster, A.R.C.S., D.I.C., A.R.I.C. *c/o English Clays Lovering Pochin & Co. Ltd., St. Austell, Cornwall.*

1949 Parkinson, Reginald Frank Derek, A.M.I.E.T. *'Lynfield', Cranmore, Nr. Shepton Mallet, Somerset.*

1938 Parrish, William, B.S., Ph.D. *Philips Laboratories Inc., Irvington-on-Hudson, New York, U.S.A.*

1946 Parry, (Mrs.) Gwendoline Iris, B.Sc. *Howard Lodge, 28 Newport Road, Cardiff, South Wales.*

1961 ‡Parslow, Geoffrey Ronald, B.Sc. *29 Ravensdale Crescent, Low Fell, Gateshead 9, Co. Durham.*

1953 ‡Parthasarathy, Amudachari, B.Sc., M.A., Ph.D. *5 South Mada Street, Triplicane, Madras 5, India.*

Year of Election

1950 Patterson, Edward Mervyn, D.Sc., M.Sc., F.R.I.C., F.G.S. *25 Caldwell Road, West Kilbride, Ayrshire, Scotland.*

1959 Pauly, Hans Johannes Christian, Dr.Phil., Mag. scient., D.G.F., S.G.F. *Byskellet 8, Rungsted Kyst, Denmark.*

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1957 Payne, Bryan Oliver, M.Sc., D.I.C., F.Inst.P. *Cooke, Troughton, and Simms Ltd., Haxby Road, York.*

1938 Payne, Cecil James, B.Sc. *Precious Stone Section, Laboratory of the London Chamber of Commerce, 15 Hatton Garden, London E.C. 1.*

1954 ‡Peacock, James Douglas, B.Sc., F.G.S. *Geological Survey of Great Britain, Southpark, 19 Grange Terrace, Edinburgh 9.*

1946 Pearl, Richard M., B.A., M.A. *Dept. of Geology, Colorado College, Colorado Springs, Colorado, U.S.A.*

1948 Pease, Martyn Edward, M.A. *c/o Imperial Smelting Processes Ltd., St. Andrew's Road, Avonmouth, Bristol.*

1957 Perrault, Guy, Ph.D., M.A., B.A. Professor of Mineralogy, *École Polytechnique, 2500 Avenue Guyard, Montreal 26, Canada.*

1951 ‡Perrin, Robert Michael Sumner, M.A., B.Sc., Ph.D. *School of Agriculture, The University, Cambridge.*

1958 ‡Petrov, Valeri Petrovich, Dr. Prof. *c/o Knizhny Otdel, Akademii Nauk, Ul. Kropotkina 16, Moscow 34, U.S.S.R.*

1923 ‡Phemister, James, M.A., D.Sc., F.R.S.E., F.G.S. *c/o Geological Survey of Great Britain, Southpark, 19 Grange Terrace, Edinburgh 9.*

1926 ‡Phemister, Thomas Crawford, Sc.M., Ph.D., D.Sc., F.R.S.E., F.G.S. Professor of Geology and Mineralogy, *Marischal College, University of Aberdeen, Aberdeen.*

1926 *Phillips, Frank Coles, M.A., Ph.D., F.G.S. *Dept. of Geology, The University, Bristol 8.*

1949 ‡Phillips, Roy, B.Sc. *Dept. of Geology, University of Durham, Science Laboratories, South Road, Durham.*

1949 Pitcher, Wallace Spencer, B.Sc., Ph.D., D.I.C., F.G.S. *15 Blenheim Gardens, Wallington, Surrey.*

1947 *Poldervaart, Arie, D.Sc., Ph.D. *Dept. of Geology, Columbia University, New York 27, N.Y., U.S.A.*

1958 ‡Porrenga, Daniel Hittjo, Dr. *Koninklijke Shell Explor. and Prod. Laboratorium, Broekmolenweg 20–22, Delft, Netherlands.*

1910 †Porter, (Miss) Mary Winearls, D.Sc. *3 Crick Road, Oxford.*

1938 *Pough, Frederick Harvey, Ph.D. *4680 Independence Avenue, Riverdale, New York 71, N.Y., U.S.A.*

1930 Powell, Herbert Marcus, M.A., B.Sc. Reader in Chemical Crystallography, *Chemical Crystallography Laboratory, South Parks Road, Oxford.*

1949 Praagh, Gordon van, B.Sc., Ph.D., A.Inst.P. *Christ's Hospital, Horsham, Sussex.*

1938 Prider, Rex Tregilgas, B.Sc., Ph.D., F.G.S. Professor of Geology, *University of Western Australia, Nedlands, Perth, Western Australia.*

1938 Pugh, Sir William John, O.B.E., B.A., D.Sc., F.R.S. *171 Oakwood Court, Kensington, London W. 14.*

1945 Pulfrey, William, Ph.D., D.Sc., M.I.M.M., F.G.S. Commissioner (Mines and Geology), Kenya. *P.O. Box 30009, Nairobi, Kenya.*

1954 ‡Purton, Michael John, B.Sc. *Physics Dept., The University, Leeds 2.*

Year of Election

1947 ‡Raikes, Robert Martin, D.S.C., B.A. *The Fuller's Earth Union Ltd., Patteson Court, Nutfield Road, Redhill, Surrey.*

1947 ‡Raine, George Thomas, B.Sc., F.Inst.Pet. *Geological Dept., Kingston Technical College, Fassett Road, Kingston-on-Thames, Surrey.*

1954 ‡Ram, Atma, D.Sc. *Central Glass and Ceramic Research Institute, Jadavpur College, Calcutta 32, India.*

1950 ‡Randall, Bertram Arthur Owen, B.Sc. *'Zenda', 34 Primrose Hill, Low Fell, Gateshead 9, Co. Durham.*

1954 ‡Rao, Adusumilli Bhaskara, B.Sc., M.Sc., Ph.D. Professor of Mineralogy. *Curso do Geologia, Rua do Hospicio 425, Recife, Brazil.*

1948 ‡Rawlinson, William. *San Remo, Tan-y-Bryn, Rhos-on-Sea, North Wales.*

1923 Read, Herbert Harold, D.Sc., A.R.C.S., F.R.S. Emeritus Professor of Geology, *Imperial College of Science and Technology, London S.W. 7.*

1961 Reitan, Paul Hartman, A.B., Dr.Phil. *Dept. of Geology, Stanford University, Stanford, California, U.S.A.*

1960 Retief, Edward Albert, M.Sc. *Dept. of Geology and Mineralogy, University Museum, Oxford.*

1932 Reynolds, Doris Livesey, D.Sc., F.R.S.E., F.G.S. (Mrs. Arthur Holmes). *Flat 6, 20 St. John's Avenue, Putney, London S.W. 15.*

1959 Rice, Robert, B.Sc. *Rio Tinto Management Services (U.K. Ltd.), Barrington House, 59 Gresham Street, London E.C. 2.*

1961 ‡Rich, Charles Irving, Ph.D. Professor of Agronomy, *Agronomy Dept., V.P.I., Blacksburg, Virginia, U.S.A.*

1948 ‡Richardson, Henry Martin, B.Sc., F.R.I.C. *119 The Avenue, Harpfield, Stoke-on-Trent, Staffordshire.*

1915 †Richardson, William Alfred, O.B.E., D.Sc., B.A., B.Sc.(Eng.), F.G.S. *Bollard's End, Bollard's Lane, Sutton Bonington, Nottinghamshire.*

1929 Richey, James Ernest, M.C., B.A., Sc.D., F.R.S., F.G.S. *The Coach House, Grange of Monifeith, Dundee, Angus.*

1947 Rigby, George Reginald, Ph.D., B.Sc., D.I.C., A.R.C.S., A.R.I.C. *Canadian Refractories Ltd., 540 Canada Cement Building, Phillips Square, Montreal Zu., Canada.*

1955 ‡Robbins, Carl Richard, B.A., M.A. *National Bureau of Standards, Division 9.7, Washington 25, D.C., U.S.A.*

1960 ‡Roberson, Herman Ellis, B.S., M.A., Ph.D. *Harpur College, Endicott, New York, U.S.A.*

1947 ‡Roberts, Arthur Loten, Ph.D., F.R.I.C. Livesey Professor of Coal, Gas, and Fuel Industries, *The University, Leeds 2.*

1947 ‡Robertson, Robert Hugh Stannus, M.A., F.G.S. *Dunmore, Pitlochry, Perthshire.*

1955 Robinson, Stephen Clive, B.A.Sc., M.A.Sc., Ph.D., F.R.S.C. *Mineralogy and Geochemistry Division, Geological Survey of Canada, Ottawa, Ontario, Canada.*

1950 ‡Robson, Douglas Arthur, M.Sc., F.G.S. *Dept. of Geology, King's College, University of Durham, Newcastle upon Tyne 2.*

1951 ‡Robson, Geoffrey Robert, B.Sc. *Volcanological Research Dept., Regional Research Centre, I.C.T.A., Trinidad, West Indies.*

1960 Rodrigues Da Silva, Rilson, Professor of Crystallography, Mineralogy and Petrology, *Universidade do Recife, R. Hospicio 371, Recife, Brazil.*

1946 ‡Rooksby, Harold Percy, B.Sc., F.Inst.P. *1 Meadow Way. Wealdstone, Harrow, Middlesex.*

Year of Election

1947 ‡Ross, Clarence Samuel, A.B., A.M. *United States Geological Survey, Washington 25, D.C., U.S.A.*

1951 ‡Roth, Robert S., Ph.D. *13403 Dauphine Street, Silver Spring, Maryland, U.S.A.*

1947 ‡Rowland, Richards Atwell, Ph.D., F.G.S.A. *3737 Bellaire Boulevard, Houston 25, Texas, U.S.A.*

1951 Roy, Rustum, B.Sc., M.Sc., Ph.D. *Earth Sciences Dept., Pennsylvania State University, University Park, Pennsylvania, U.S.A.*

1961 ‡Rucklidge, John Christopher, B.A. *Geology Dept., University of Manchester, Manchester 13.*

1946 Rumsby, Peter Lewis, B.Sc., A.R.C.S., A.I.M.M., F.G.S. *16 Clinton Avenue, East Molesey, Surrey.*

1902 †Russell, Sir Arthur Edward Ian Montagu, Bart., M.B.E., Hon. D.Sc. *Swallowfield Park, Swallowfield, Reading, Berkshire.*

1948 Rutland, Ernest Hugo Charles, Ph.D., M.A. *14 Middleway, London N.W. 11.*

1960 Rutland, Rupert William Roye, B.Sc., Ph.D., F.G.S. *Bentham Hall, Cartwright Gardens, London W.C. 1.*

1955 Ryback, George, B.A. *36 Hainthorpe Road, West Norwood, London S.E. 27.*

1945 ‡Sabine, Peter Aubrey, B.Sc., Ph.D., A.R.C.S., F.G.S. *19 Beaufort Road, Ealing, London W. 5.*

1947 Sadashivaiah, Mysore Subbanna, M.Sc., Ph.D., D.I.C., F.G.S. Professor of Geology, *Karnatak University, Dharwar, Mysore State, India.*

1957 ‡Saenz, Irene Marianne Michaelis de. *Gabota 1308, Montevideo, Uruguay.*

1951 Sahama, Thure Georg. Professor of Geochemistry, *Institute of Geology, Snellmanink 5, Helsinki, Finland.*

1929 Sampson, Edward, C.E., M.Sc., D.Sc. Professor of Geology, *Princeton University, Guyot Hall, Princeton, New Jersey, U.S.A.*

1948 Sandréa, André Philippe, B.Sc., F.G.S. *Laboratoire de Minéralogie, Muséum National d'Histoire Naturelle, 61 rue de Buffon, Paris V, France.*

1959 Sang, Ki Nam Sang, B.S., M.S. *Geological Survey of Korea, 125 Namyongdong, Youngsan Ku, Seoul, South Korea.*

1957 ‡Sarjeant, William Anthony Swithin, B.Sc., F.G.S. *Laboratory of Sedimentology, Dept. of Geology, The University, Whiteknights Park, Reading, Berkshire.*

1931 Schairer, John Frank, M.S., Ph.D. *Geophysical Laboratory, 2801 Upton Street, Washington 8, D.C., U.S.A.*

1960 Scheffler, Lewis F., Jr., B.A. *968 Harris Avenue, Newark, Ohio, U.S.A.*

1957 ‡Schlocker, Julius, M.A., A.B. *U.S. Geological Survey, Engineering Geology Branch, 4 Homewood Place, Menlo Park, California, U.S.A.*

1955 ‡Schmidt, Elias Rudolph, M.Sc. *c/o National Building Research Institute, C.S.I.R., P.O. Box 395, Pretoria, South Africa.*

1928 *Scholtz, Douglas Leinster, D.Sc. Professor of Geology, *University of Stellenbosch, South Africa.*

1956 ‡Schultz, Leonard Gene, Ph.D., M.S., B.S. *U.S. Geological Survey, Federal Center, Denver, Colorado, U.S.A.*

1943 Seager, Andrew Ford, B.Sc., Ph.D., A.K.C., F.G.S. *Farm House, Vicarage Road, Egham, Surrey.*

1949 Segnit, Edgar Ralph, M.Sc., Ph.D. *C.S.I.R.O., Division of Building Research, Highett, Victoria, Australia.*

1961 Seidov, Adil Gidayatovich, Professor, Dr. Geology and Mineralogy. *Ul. Fizuli 67, Institute of Geology, Azerbaijan Academy of Science, Baku, Azerbaijan S.S.R.*

Year of Election

1955 Servos, Kurt, B.Sc., M.Sc., A.I.M.E. *School of Mineral Sciences, Stanford University, Stanford, California, U.S.A.*

1950 Shagan, Reginald, B.Sc. *Direccion de Geologia Ministerio de Minas e Hidrocarburos, Centro Simon Bolivar, Caracas, Venezuela.*

1948 Shaub, Benjamin Martin. Professor of Geology, *Smith College, Northampton, Massachusetts, U.S.A.*

1949 ‡Shearman, Douglas James, B.Sc., F.G.S. *5 Sackville Road, Southend-on-Sea, Essex.*

1956 Shimazaki, Yoshihiko, B.Eng. *1005–4 Chome, Shimomeguro, Meguro-ku, Tokyo, Japan.*

1955 ‡Simcock, Joseph Henry. *'Cranford', Lovatt Avenue, Milehouse, Newcastle-under-Lyme, Staffordshire.*

1957 ‡Simpson, Brian, M.Sc., F.G.S., A.I.C.E. *Dept. of Geology, University College, Singleton Park, Swansea.*

1950 Simpson, Eric Stanley Wynne, M.Sc. *Dept. of Geology, University of Cape Town, Rondebosch, Cape Province, South Africa.*

1907 *Simpson (formerly Hilton), Harold, M.A., D.Sc. Formerly Professor of Mathematics in the University of London. *82B St. Bernard's Road, Oxford.*

1956 Skelding, Frank Hall.

1960 Skelhorn, Raymond Richard, B.Sc., Ph.D., F.G.S. *5 Park Way, East Molesey, Surrey.*

1960 Skiba, Wladyslaw Jan, M.Sc., Ph.D., F.G.S. *Geology Dept., Imperial College of Science and Technology, Prince Consort Road, London S.W. 7.*

1957 ‡Skinner, Brian John, B.Sc., A.M., Ph.D. *U.S. Geological Survey, G–218, G.S.A. Building, Washington 25, D.C., U.S.A.*

1948 ‡Smith, Arnold Nigel, B.A. *c/o Messrs. Pilkington's Tiles Ltd., Clifton Junction, Manchester.*

1958 Smith, Deane Kingsley, Jr., B.S., Ph.D. *Chemistry Dept., Lawrence Radiation Laboratory, Livermore, California, U.S.A.*

1958 ‡Smith, Frank Steeley. *34 Glandon Drive, Cheadle Hulme, Cheshire.*

1958 Smith, James Robert, B.Sc., M.Sc., Ph.D. *Dept. of Geology, University of Saskatchewan, Saskatoon, Saskatchewan, Canada.*

1954 Smith, Joseph Victor, M.A., Ph.D. *Dept. of Geology, The University of Chicago, Chicago 37, Illinois, U.S.A.*

1956 Smith, Robert Leland, B.S. *U.S. Geological Survey, Washington 25, D.C., U.S.A.*

1910 ‡*Smith, Walter Campbell, Lt.-Col., C.B.E., M.C., T.D., M.A., Sc.D., F.G.S. Formerly Keeper of Minerals, *British Museum (Natural History), Cromwell Road, London S.W. 7.*

1943 ‡Smithson, Frank, D.Sc., F.R.M.S., F.G.S. *University College of North Wales, Memorial Buildings, Bangor.*

1940 Soper, Henry Robert, B.Sc., A.R.C.S. *Brierley House, Radcliffe New Road, Whitefield, Manchester.*

1944 Steen, Charles A. *Utex Exploration Co., Box 5238, Reno, Nevada, U.S.A.*

1954 ‡Steger, Eric Helmut, B.Sc., F.G.S. *16 Lingfield Road, London S.W. 19.*

1955 ‡Steiner, Alfred. *New Zealand Geological Survey, P.O. Box 368, Lower Hutt, New Zealand.*

1947 ‡Stephen, Isaac, B.Sc. *Pedology Dept., Rothamsted Experimental Station, Harpenden, Hertfordshire.*

1954 Stevens, Robert Denzil, B.Sc., F.G.S.

Year of Election

1947 ‡Stevens, Rollin Elbert, A.B., A.M. *United States Geological Survey, Geochemistry and Petrology Branch, 345 Middlefield Road, Menlo Park, California, U.S.A.*

1960 Stevenson, John Sinclair, B.A., B.A.Sc., Ph.D. Professor of Mineralogy, *Dept. of Geology, McGill University, Montreal, Port Quebec, Canada.*

1961 Stewart, David Benjamin, A.B., A.M., Ph.D. *United States Geological Survey, Washington 25, D.C., U.S.A.*

1940 Stewart, Frederick Henry, B.Sc., Ph.D., F.G.S. Regius Professor, *Grant Institute of Geology, King's Buildings, West Mains Road, Edinburgh.*

1953 Steyn, Johannes Gottfried Drotsky, M.Sc., D.Sc. *223 Main Street, Waterkloof, Pretoria, South Africa.*

1923 Stillwell, Frank Leslie, D.Sc. *44 Elphin Grove, Hawthorne, Victoria, Australia.*

1958 ‡Stimson, Arthur. *31 Heath Road, Pamber Heath, Tadley, Hants.*

1953 ‡Strunz, Hugo, D.Ph., D.Sc. Professor, *Institut für Mineralogie und Petrographie der Technischen Universität, Hardenbergstraße 35, Berlin-Charlottenburg 2, Germany.*

1926 ‡Stuart, Alan, M.Sc., F.G.S., F.R.M.S. Professor of Geology, *The University, New Arts Building, Queen's Drive, Exeter.*

1958 ‡Stuart, John William, A.B., M.A. *Dept. of Geology, University of Chicago, Chicago, Illinois, U.S.A.*

1956 Stumpfl, Eugen, Dr. *Geology Dept., University College, Gower Street, London W.C. 1.*

1962 Stuart, Brian Albert, B.Sc., Ph.D., F.G.S. *Geology Dept., Bedford College, Regent's Park, London N.W. 1.*

1951 ‡Subramaniam, Anantharama Parameswara, M.Sc., A.M., Ph.D., F.G.S. Superintending Geologist in-charge, *Geological Survey of India, Western Circle, Botawala Chambers, Sir Phirozsha Menta Road, Bombay, India.*

1958 Sunagawa, Ichiro, D.Sc. *Geological Survey of Japan, Hisamoto-cho 135, Kawasaki-shi, Japan.*

1950 Sutton, John, B.Sc., Ph.D., A.R.C.S., F.G.S. Professor of Geology, *Geology Dept., Imperial College of Science and Technology, Prince Consort Road, London S.W. 7.*

1928 Sweet, (Miss) Jessie May, B.Sc., M.B.E. *9 Maurice Place, Edinburgh 9.*

1952 ‡Swineford, (Miss) Ada, S.B., S.M., F.G.S.A. *State Geological Survey, Lawrence, Kansas, U.S.A.*

1960 Switzer, George, A.B., A.M., Ph.D. *United States National Museum, Washington 25, D.C., U.S.A.*

1954 Taylor, Edward Drummond, Lieut.-Col., Més.Sc. *400 Wood Avenue, Rockcliffe Park, Ottawa 2, Ontario, Canada.*

1951 ‡Taylor, Harry Francis West, B.Sc., Ph.D. *Dept. of Chemistry, The University, Old Aberdeen.*

1954 Taylor, James, B.Sc. *Geological Survey and Museum, Exhibition Road, London S.W. 7.*

1945 ‡Taylor, James Haward, M.A., B.Sc., Ph.D., F.G.S., F.R.S., Professor of Geology, *King's College, Strand, London W.C. 2.*

1961 Taylor, Kenneth, B.Sc., F.G.S. *Geological Survey and Museum, Exhibition Road, London S.W. 7.*

1955 Taylor, Stuart Ross, M.Sc., Ph.D. *Dept. of Geophysics, Research School of Physical Science, Australian National University, Canberra, Australia.*

1938 ‡Taylor, William Hodge, M.A., Ph.D., D.Sc., F.Inst.P. Reader in Crystallography, *Crystallographic Laboratory, Free School Lane, Cambridge.*

Year of Election

1951 ‡Teichner, Stanislas Jean, Dr. *Institut de Chimie, 93 rue Pasteur, Lyon, France.*

1958 ‡Tettenhorst, Rodney Tampa, B.S., M.A. *Dept. of Mineralogy, Ohio State State University, Columbus 10, Ohio, U.S.A.*

1946 Thomas, Leslie Albert Arthur, B.Sc., F.Inst.P. *36 Blenheim Gardens, Wembley, Middlesex.*

1945 *Thompson, Robert Mitchell, M.A., Ph.D. Assistant Professor of Mineralogy, *University of British Columbia, Vancouver, Canada.*

1921 ‡*Tilley, Cecil Edgar, B.Sc., Ph.D., F.R.S. *Dept. of Mineralogy and Petrology, Downing Place, Cambridge.*

1962 ‡Tlapek, John William, A.B. *501 La Rose Street, Ste. Genevieve, Missouri, U.S.A.*

1960 Tocher, Francis Edward, B.Sc., Ph.D. *Dept. of Geology and Mineralogy, Marischal College, University of Aberdeen, Aberdeen.*

1960 ‡Tomkeieff, Michael Vadime, B.A. *19A Gateford Road, Worksop, Nottinghamshire.*

1925 ‡*Tomkeieff, Sergei Ivanovich, M.Sc., D.Sc., F.R.S.E., F.G.S. Professor of Petrology, *Dept. of Geology, King's College, University of Durham, Newcastle upon Tyne 2.*

1953 ‡Tooker, Edwin Wilson, Ph.D. *U.S. Geological Survey, 4 Homewood Place, Menlo Park, California, U.S.A.*

1958 Torre de Assunção, Carlos Fernando, Professor of Mineralogy and Petrology, *Museu e Laboratório Mineral´gico e Geologico, Universidade de Lisboa, Lisboa, Portugal.*

1955 Tozer, Charles Fallows, B.Sc., A.R.C.S., F.G.S. *156 Wellmeadow Road, London S.E. 6.*

1927 *Trechmann, Charles Taylor, D.Sc., F.G.S., F.Z.S. *'Hudworth Tower', Castle Eden, Co. Durham.*

1939 Tunell, George, Ph.D. Associate Professor of Geology, *University of California, 405 Hilgard Avenue, Los Angeles 24, California, U.S.A.*

1949 Turley, Tomasz Jerzy, Professor. *2101 North Kedzie Avenue, Chicago 47, Illinois, U.S.A.*

1951 Tuttle, Orville Frank, Ph.D. *Mineral Industries Building, Pennsylvania State University, University Park, Pennsylvania, U.S.A.*

1960 ‡Umpleby, David Colin, B.Sc. *'Ashcroft', Menston Old Lane, Burley-in-Wharfedale, Ilkley, Yorkshire.*

1947 ‡Unmack, (Miss) Augusta Marie, B.Sc. *Landbohojskolens Kemiske Laboratorium, Bulowsvej 13, Copenhagen V, Denmark.*

1962 Uytenbogaardt, Willem. Professor of Mineralogy and Petrology, *Geologisch Instituut Vrije Universiteit, De Lairessestraat 142, Amsterdam 7, Netherlands.*

1949 ‡Vallance, Thomas George, B.Sc., Ph.D., F.G.S. *Dept. of Mineralogy and Petrology, Downing Place, Cambridge.*

1951 ‡Vann, Alfred Ernest, *c/o Lavino Ltd., 31/45 Gresham Street, London E.C. 2.*

1959 Van Zyl, Colin, M.Sc. *Central Metallurgical Laboratory, Anglo-American Corporation, P.O. Box 106, Crown Mines, Transvaal, South Africa.*

1933 *Vaux, George, B.S., F.R.G.S. *'The Thicket', Bryn Mawr, Pennsylvania, U.S.A.*

1925 Vendl, Aladár, Ph.D., Professor. *Nemetvölgyi ut 70–72, Budapest XII, Hungary.*

1952 Venkatram, Manjeri Sundaram, B.A., B.L. *Geological Survey of India, 27 Chowringhee, Calcutta 13, India.*

Year of Election

1946 ‡Vincent, Ewart Albert, M.A., B.Sc., Ph.D., F.R.I.C., F.G.S. Professor of Geology, *Dept. of Geology, The University, Manchester 13.*

1955 Vincent, Herbert Cubitt Gostling, M.A., A.R.I.C., M.Inst.P., F.G.S. '*Dereham', Victoria Avenue, Hout Bay, Cape, South Africa.*

1953 Viswanathan, Padmanabha. *c/o Ceylon Mineral Sands Corporation, Ilmenite Factory, Pulmoddai, P.O., East Ceylon.*

1958 Wadsworth, Wilfred John, M.A., D.Phil., F.G.S. *Grant Institute of Geology, King's Buildings, West Mains Road, Edinburgh 9.*

1930 ‡Wager, Lawrence Rickard, M.A., Sc.D., B.Sc., F.R.S. Professor of Geology, *Dept. of Geology and Mineralogy, University Museum, Oxford.*

1949 Wahl, Walter (Andre), Professor. *Observatoriegatan 8, Helsinki, Finland.*

1953 ‡Wakelin, Richard John, B.Sc., Ph.D., A.Inst.P. *United Kingdom Atomic Energy Authority, Atomic Weapons Research Establishment, Aldermaston, Berkshire.*

1930 *Walker, Frederick, M.A., Ph.D., D.Sc., F.R.S.E., F.G.S. Professor of Mineralogy and Geology, *Geology Dept., Queen's College, Dundee, Scotland.*

1947 ‡Walker, George Forbes, B.Sc., Ph.D. *Division of Industrial Chemistry, Commonwealth Scientific and Industrial Research Organization, Box 4331, G.P.O., Melbourne, Australia.*

1950 Walker, George Patrick Leonard, B.Sc., M.Sc., F.G.S. *Dept. of Geology, Imperial College of Science and Technology, London S.W. 7.*

1936 Walls, Robert, M.Sc., Ph.D., F.G.S. *c/o British Petroleum Co. Ltd., Exploration Research Laboratory, Cadbury Road, Sunbury-on-Thames, Middlesex.*

1942 *Walsh, Raymond Collinge. *c/o Standard Bank of South Africa, West Street, Durban, Natal, South Africa.*

1950 ‡Walton, Ewart Kendall, B.Sc., Ph.D. *c/o Grant Institute of Geology, King's Buildings, West Mains Road, Edinburgh 9.*

1946 Warren, Harry Verney, D.Ph., F.R.S.C. Professor of Mineralogy and Petrology, *University of British Columbia, Vancouver 8, Canada.*

1959 ‡Watanabe, Takeo, Dr.Sc. Professor of Economics and Geology, *Geological Institute, Faculty of Science, University of Tokyo, Motofuji-cho, Hongo, Bunkyo-ku, Tokyo, Japan.*

1947 Watt, David Scott, M.A., B.Sc., F.G.S. *13 Pennan, Fraserburgh, Aberdeenshire.*

1955 Watters, William Asher, M.Sc., F.G.S. *c/o New Zealand Geological Survey, P.O. Box 368, Lower Hutt, New Zealand.*

1929 Wayland, Edward James, C.B.E., A.R.C.S., M.I.M.M., F.G.S. Formerly Director of the Geological Survey of Uganda. *The Regency Hotel, Ramsgate, Kent.*

1945 Webb, John Stuart, A.R.S.M., B.Sc., Ph.D., F.G.S., Professor of Applied Geochemistry, *Imperial College of Science and Technology, Prince Consort Road, London S.W. 7.*

1943 Webster, Robert. *5 Burstow Road, Wimbledon, London S.W. 20.*

1952 Weedon, Douglas Stanley, M.A. *c/o Dept. of Geology, University Museum, Oxford.*

1956 ‡Weir, Alan Herbert, B.A. *42 Park Rise, Harpenden, Hertfordshire.*

1953 ‡Weiss, E. Joseph, Ph.D. *105 C.P. Hall, Dept. of Ceramic Engineering, University of Texas, Austin, Texas, U.S.A.*

1929 Wells, Alfred Kingsley, D.Sc., F.G.S. Formerly Reader in Geology in the University of London. *114 Queen's Road, Buckhurst Hill, Essex.*

Year of Election

1945 Wells, Maurice Kingsley, M.Sc., Ph.D., F.G.S. *Dept. of Geology, University College, Gower Street, London W.C. 1.*

1960 Wenden, Henry Edward, B.Sc., M.A., Ph.D., Professor. *Dept. of Mineralogy, Ohio State University, 124 West 17th Avenue, Columbus 10, Ohio, U.S.A.*

1951 ‡West, Herbert William Harcourt, B.Sc., F.G.S. *The Hollies, Lawton Road, Alsager, Cheshire.*

1929 West, William Dixon, C.I.E., M.A., Sc.D., F.G.S. Formerly Director of the Geological Survey of India. *Dept. of Geology, University of Saugar, Sagar (M.P.), India.*

1950 ‡Westoll, Thomas Stanley, Ph.D., D.Sc., F.R.S.E., F.G.S. Professor of Geology, *King's College, University of Durham, Newcastle upon Tyne 2.*

1961 ‡Wey, Raymond, Dr.-es-Sc. Professor of Mineralogy, *École Supérieure de Chimie, Mulhouse, France.*

1947 ‡White, James, D.Sc., Ph.D., Professor. *20 Ranmoor Cliffe Road, Fulwood, Sheffield 10.*

1954 ‡White, Joe Lloyd, B.S., M.S., Ph.D. *Agronomy Dept., Purdue University, Lafayette, Indiana, U.S.A.*

1951 ‡White, W. Arthur, B.S., M.S. *Illinois State Geological Survey, 107 Natural Resources Building, Urbana, Illinois, U.S.A.*

1947 ‡Whiting, Gilbert Harry, B.A., Ph.D. *London Brick Co. Ltd., Stewartby, Bedford.*

1949 ‡Whittaker, Eric James William, M.A., B.Sc. *Ling Crag, Buxton Road, Chinley, Stockport, Cheshire.*

1944 Whitten, Douglas Gilbert Alban, B.Sc., A.R.C.S., F.G.S. *6 The Ridge, Surbiton, Surrey.*

1948 ‡Whitten, Eric Harold Timothy, B.Sc., Ph.D., F.G.S. Professor, *Geology Dept., Northwestern University, Evanstown, Illinois, U.S.A.*

1947 *Wickman, Frans Erik. Professor, *Riksmuseum, Stockholm 50, Sweden.*

1942 Wigglesworth, Robert, M.B., B.S. *Cranford, Nr. Kettering, Northamptonshire.*

1918 Wilcockson, William Howson, M.A., F.G.S. *5 Newbould Lane, Sheffield 10.*

1956 Wilkinson, John Frederick George, B.Sc., Ph.D. *Dept. of Geology, University of New England, Armidale, New South Wales, Australia.*

1949 ‡Wilkinson, Peter, B.Sc., A.R.C.S., F.G.S., F.R.G.S. *Dept. of Geology, The University, St. George's Square, Sheffield 1.*

1938 ‡Williams, David, D.Sc., Ph.D., B.E., M.I.M.M., F.G.S. Professor of Mining Geology, *Imperial College of Science and Technology, London S.W. 7.*

1958 Williams, Scott John, B.A. *440 North Scottsdale Road, Scottsdale, Arizona, U.S.A.*

1950 ‡*Williamson, William Owen, B.Sc., Ph.D., A.R.I.C. *Dept. of Ceramic Technology, College of Mineral Industries, Pennsylvania State University, University Park, Pennsylvania, U.S.A.*

1950 Wilson, Allan Fraser, D.Sc., F.G.S., F.G.A.A. Professor, *Dept. of Geology and Mineralogy, University of Queensland, St. Lucia, Brisbane, Queensland, Australia.*

1949 ‡Wilson, Arthur James Cochran, M.Sc., Ph.D., F.Inst.P. Professor of Physics, *University College, Cardiff.*

1950 ‡Winchell, Horace, A.B., A.M., Ph.D. Professor. *40 Deepwood Drive, Hamden 17, Connecticut, U.S.A.*

1962 ‡Winchell, Robert Eugene, B.S., M.S. *Dept. of Mineralogy, Ohio State University, Columbus 10, Ohio, U.S.A.*

Year of Election

1948 ‡Winkler, Helmut Gustav Franz, D.Ph. Professor, *Mineralogisches Institut, Deutschhausstraße 10, Marburg/Lahn 16, Germany.*

1942 ‡Wisden, (Miss) Dorothy Ethel, M.Sc., F.G.S. *Dept. of Geology, University College, Southampton.*

1955 Wise, William Stewart, B.Sc., M.S., Ph.D., Professor, *Geology Dept., University of California, Santa Barbara University, California, U.S.A.*

1934 ‡*Wiseman, John Dugdale Holt, M.A., Ph.D., F.G.S. *Dept. of Mineralogy, British Museum (Natural History), Cromwell Road, London S.W. 7.*

1952 ‡*Witte, Georges Camille Gaston Marie De. *20 Nieuwstraat, Wieze, Belgium.*

1959 Woermann, Eduard, B.Sc., Dr. *Haupstraße 55, Heidelberg, Germany.*

1962 Woolley, Alan Robert, B.Sc. *Geology Dept., Bedford College, Regent's Park, London N.W. 1.*

1927 ‡Wooster, William Alfred, M.A., Ph.D., D.Sc. *Dept. of Mineralogy and Petrology, Downing Place, Cambridge.*

1958 *Wright, Hedley Gordon, M.A., F.G.S. *Dept. of Geology, Queen's College, Dundee, Angus.*

1957 Wright, John Bucknall, B.A., F.G.S. *University of Otago, Dunedin, C.I., New Zealand.*

1959 Wyley, John Fitzthomas. *126 Merry Hill Road, Bushey, Hertfordshire.*

1958 Wyllie, Peter John, B.Sc., Ph.D. *Dept. of Mineralogy and Petrology, College of Mineral Industries, Pennsylvania State University, University Park, Pennsylvania, U.S.A.*

1952 *Yoder, Hatten Schuyler, Jr., S.B., Ph.D. *Geophysical Laboratory, 2801 Upton Street, Washington 8, D.C., U.S.A.*

1951 ‡Youell, Ronald Frederick, B.Sc., A.R.C.S. *Physics Dept., The University, Leeds 2.*

1958 Young, Brian Bayley, B.Sc., A.R.S.M. *Mining Geology Research, Roya School of Mines, Prince Consort Road, London S.W. 7.*

1955 ‡Young, Brian Raymond, M.Sc., F.G.S. *36 Banbury Road, Stratford-on-Avon, Warwickshire.*

1957 Zagloul, Zaki Mohammed, B.Sc., M.Sc., Ph.D. *University of Assiut, Assiut, Egypt.*

1960 Zimmerman, Don Oswald, B.Sc. *Bureau of Mineral Resources, Childers Street, Canberra, A.C.T., Australia.*

1960 Zinovieff, Peter, M.A., D.Phil., F.G.S. *Dept. of Geology, University Museum, Oxford.*

1941 Zodac, Peter. *Box 29, Peekskill, New York, U.S.A.*

1953 ‡Zussman, Jack, M.A., Ph.D. *Dept. of Geology, The University, Manchester 13.*

NEW MEMBERS, MARCH 1962

1962 ‡Atkin, David, M.Sc., B.Sc. *Geological Survey of Great Britain, Atomic Energy Division, Young Street, Kensington, London W. 8.*

1962 ‡Berger, Richard Lee, M.S. *Dept. of Geology, University of Illinois, Urbana, Illinois, U.S.A.*

1962 Chinner, Graham Alan, Ph.D., F.G.S. *Dept. of Mineralogy and Petrology, Downing Place, Cambridge.*

1962 ‡Fraser, William Elrick, M.A., B.Sc., Ph.D. *Dept. of Geology and Mineralogy, Marischal College, Aberdeen.*

1962 ‡Harward, Moyle E., B.S., M.S., Ph.D. *Dept. of Soils, Oregon State University, Cornwallis, Oregon, U.S.A.*

Year of Election

1962 ‡*Levinson, Alfred Abraham, Ph.D. *Gulf Research and Development Co., P.O. Drawer 2038, Pittsburgh 30, Pennsylvania, U.S.A.*

1962 Smith, Dorian Glen Whitney, B.Sc., M.Sc., F.G.S. *Dept. of Mineralogy and Petrology, Downing Place, Cambridge.*

1962 ‡Vuagnat, Marc Bernard, Dr. Sc., *Institut de Minéralogie de l'Université, 22 Quai de l'École de Médecine, Geneva, Switzerland.*

1962 Wright, Peter Charles, B.Sc., Ph.D. *Dept. of Geology and Mineralogy, University Museum, Oxford.*

PROCEEDINGS

OF THE

MINERALOGICAL SOCIETY

(1961)

EXCERPT MINUTES OF COUNCIL MEETING

Held in the Apartments of the Geological Society, Burlington House, London W., 26 *January* 1961, *at* 3 *p.m.*

Prof. L. R. Wager, President, in the Chair.

The following were provisionally elected Ordinary Members of the Society: Dr. A. M. Asklund, Mr. J. R. Cann, Mr. P. A. Dingsdale, Mr. R. C. Doman, Dr. S. Moorbath, Mr. R. A. Nash, Dr. P. H. Reitan, Prof. C. I. Rich, Dr. D. B. Stewart.

The death of Dr. R. Gradwell was reported.

The resignations of Dr. G. O. Assarsson, Dr. C. E. Weaver, Prof. W. J. McCaughey, and Dr. N. J. Snelling were accepted.

Reports were received from the Treasurer, the Editors, and the Clay Minerals Group; and the question of the need for funds for entertaining Group visitors was considered.

The provisional approval by the Mineralogical Society of America of the draft plan for the future of *Mineralogical Abstracts* for circulation to all nations by the Commission on Abstracts was reported.

The advance by the Royal Society of an interest-free loan of £750 towards the costs of reprinting the back numbers of the *Mineralogical Magazine* was reported.

The appointments of Dr. J. Phemister (Abstracts), Dr. M. H. Hey (Mineral Data; New Minerals), and Dr. G. F. Claringbull (Museums) as the Society's representatives to Commissions of the International Mineralogical Association were confirmed. The appointment of a representative to the Commission on Teaching was postponed.

The representation made by the Royal Society/British Academy Committee to the Minister for Science for the retention in the new Rating and Valuation Bill of the principles established in the Scientific Societies Act, 1843, and the Valuation Act, 1955, was reported.

The request by the Royal Society for the formal adoption by the

Society of the 'British' system for transliteration of Modern Cyrillic for use in its publications was reported.

The award to Miss J. M. Sweet (British Museum (Nat. Hist.)) of M.B.E. in the New Year's Honours was reported and the Council's congratulations on the distinction were directed to be conveyed to her.

Dr. Howie raised the question of occasional Council and General Meetings being held outside London for the convenience of those members living at some distance from London.

GENERAL MEETING

Held in the Apartments of the Geological Society, Burlington House, London W., 26 January 1961, at 5 p.m.

Prof. L. R. Wager, President, in the Chair.

Sixty Members and six Visitors were present.

The elections of nine Ordinary Members of the Society provisionally made by the Council were confirmed.

The following exhibit was shown:

Metatyuyamunite from the Permian, Budleigh Salterton, Devon: by Mr. J. F. Wyley.

The following papers were read and discussed:

1. Movement of screw dislocations in haematite: by Dr. A. F. Seager and Dr. I. Sunagawa (vol. 33, p. 1).

2. Some hydrated calcium silicates from Portree, Isle of Skye: by Miss Jessie M. Sweet, with analyses by Mr. D. I. Bothwell (vol. 32, p. 745).

3. The dehydration of brucite: by Mr. M. C. Ball and Dr. H. F. W. Taylor (vol. 32, p. 754).

4. Kennedyite, a new mineral of the pseudobrookite series: by Dr. O. von Knorring and Dr. K. G. Cox (vol. 32, p. 676).

5. Occurrence of stokesite in Czechoslovakia: by Dr. F. Čech (read by Dr. M. H. Hey (vol. 32, p. 673)).

The following papers were taken as read:

1. Contribution to the study of ore minerals in some igneous rocks from Assynt: by Dr. E. F. Stumpfl (vol. 32, p. 767).

2. Amphibolite-granulite facies assemblages in southern Nyasaland: by Dr. S. W. Morel (vol. 32, p. 725).

3. On the lithium amphibole holmquisite, from Benson pegmatite mine, Mtoko, Southern Rhodesia: by Dr. O. von Knorring and Mr. G. Hornung (vol. 32, pp. 731, 823).

4. A refinement of the dickite structure and some remarks on polymorphism in kaolin minerals: by Mr. R. E. Newnham (vol. 32, p. 683).

EXCERPT MINUTES OF COUNCIL MEETING

Held in the Apartments of the Royal Entomological Society of London, 41 Queen's Gate, S.W. 7, 23 March 1961, at 3 p.m.

Prof. L. R. Wager, President, in the Chair.

The following were provisionally elected Ordinary Members of the Society: Daniel Everett Appleman, Luciano Favretto, Eugene Bischoff Gross, Meurig Powell Jones, Kenneth Taylor.

The death of Dr. Esper Signius Larsen, Jr., was reported.

The name of Prof. J. L. Kulp was removed from the list of members for non-payment of subscriptions.

Reports were received from the Treasurer, the Editors, the Clay Minerals Group, and the Publications Committee. The Treasurer presented the audited accounts for 1960, which were approved (vol. 32, pp. lxxxii–lxxxvii).

It was decided that meetings held outside London should be in addition to those normally held in London and should not necessitate a preceding Council Meeting. The possibility of combining such meetings with field excursions was discussed.

Appreciation was expressed by the Council to Dr. Hey for his endeavours to keep the publication dates of the *Magazine* on schedule; and to Dr. Bradley for her excellent work on the Index of the Abstracts.

The resignation of Mr. E. A. Jobbins (now Publications Manager) as Assistant Editor of *Mineralogical Abstrscts* and the appointment to this position of Dr. O. Bradley was approved by the Council.

The figure of 3000 copies for the printing and binding of the X-ray monograph was agreed; and the price of £3 for non-members and £2 for one copy to members was suggested.

It was agreed that papers submitted to the Editor of the *Mineralogical Magazine* should be considered for refereeing with respect to the existing list of referees, but that the list might be extended.

The formal adoption by the Society of the 'British' (Brit. Standards

2979C) system for transliteration of Modern Cyrillic for use in its publications was approved by the Council.

Nominations for election to the Council were considered. The following Ordinary Members of the Council were due to retire: Dr. J. R. Butler, Dr. R. A. Howie, Prof. F. H. Stewart, and Dr. R. F. Youell. The resignation of Mr. E. A. Jobbins (Publications Manager) as a replacement for Dr. J. R. Butler (transferred to office of Secretary) was accepted. The following were proposed for election as Ordinary Members of Council at the Anniversary Meeting in November 1961: Dr. W. J. Wadsworth, Dr. J. Zussman, Dr. A. P. Millman, and Prof. W. A. Deer.

Dr. E. A. Vincent was nominated as the Society's representative to the Teaching Commission of the International Mineralogical Association.

The suggestion by the President of the International Mineralogical Association that the two journals of the British and American Societies be merged into a monthly publication, 'The International Mineralogist', was rejected by the Council.

The Council agreed that representation be made to the Minister for Science for exemption, under clause 2 (6), from the restrictions of the Radioactive Substances Act, 1960, of 'collections of radioactive minerals by universities and public museums for purposes of education and research'.

GENERAL MEETING

Held in the Apartments of the Royal Entomological Society of London, 41 Queen's Gate, S.W. 7, 23 March 1961, at 5 p.m.

Prof. L. R. Wager, President, in the Chair.

Forty-eight Members and two Visitors were present.

The elections of five Ordinary Members of the Society provisionally made by the Council were confirmed.

The following papers were read and discussed:

1. Green rust and the formation of magnetite: by Dr. A. L. Mackay.

The determination of the structure of chalcophanite $ZnMn_3O_7.3H_2O$ by Wadsley enables the crystal chemistry of the green material (which is a precursor of magnetite when the latter is formed from solution) to be better understood. Electron microscope evidence as to the process involved is advanced.

2. Metamorphism and metasomatism of rocks of the Moine Series by a dolerite plug in Glenmore, Ardnamurchan: by Dr. B. C. M. Butler (vol. 32, p. 866).

3. Disordered structural states in the dehydration of goethite and diaspore: by Mr. J. Lima-de-Faria and Dr. P. Gay (vol. 33, p. 37).

4. Electron-optical and electron-diffraction study of a disordered structural state in the transformation goethite–hematite: by Dr. J. D. C. McConnell and Mr. J. Lima-de-Faria (vol. 32, p. 898).

The following papers were taken as read:

1. Solid solution relationships in some titaniferous iron oxide ores of basic igneous rocks: by Mr. J. B. Wright (vol. 32, p. 778).

2. The use of petrographic methods for the identification of non-metallic inclusions in steel: by Mr. C. G. Nicholson (vol. 32, p. 790).

3. The use of Buerger's algorithm in crystallographic calculations: by Dr. R. J. Davis (vol. 32, p. 817).

4. Weathering of sulphide minerals in coal: production of ferrous sulphate heptahydrate: by Dr. M. Kossenberg and Mr. A. C. Cook (vol. 32, p. 829).

5. Some observations concerning viscosity and anionic groups in silicate melts: by Dr. E. Christiaan de Wys (vol. 32, p. 825).

EXCERPT MINUTES OF COUNCIL MEETING

Held in the Apartments of the Geological Society, Burlington House, London W., 8 June 1961, at 3 p.m.

Prof. L. R. Wager, President, in the Chair.

The following were provisionally elected Ordinary Members of the Society: Egbert Christiaan de Wys, Godfrey Jefford, John Kenneth Marshall, Emilio Mutis-Duplat.

The resignations of Mr. L. R. Raymond and Dr. J. N. Mukherjee were accepted.

Reports were received from the Treasurer, the Editors, the Clay Minerals Group, and the Publications Committee.

The bequest, for eventual transfer, of funds of the late Mr. F. N. Ashcroft, invested in £100 Esso Petroleum Co. 5% 1st Debenture Shares in the name of Dr. Campbell Smith, was reported. This would be effected when the new Act controlling permissible Trustee Stock came into force, and the investment added to the Miers–Spencer Memorial Fund.

It was agreed that the revised price for the X-ray monograph would be £4. 4*s*. ($12.50 U.S.) for non-members and £3 3*s*. ($9.50 U.S.) for

members for one copy; that a full-page advertisement of the monograph be inserted in the September 1961 number of the *Mineralogical Magazine*; and that the authors who had contributed to the monograph should each receive two free copies of the monograph and twenty-five offprints of their chapters.

The price of £3. 3*s*. per calendar year of four numbers for back numbers of the Mineralogical Abstracts for both members and subscribers was determined.

It was agreed that the work relating to the Clay Minerals Group publications should, on a trial basis, be taken over by the Society's office at 41 Queen's Gate.

The representation made by the Secretary and Dr. Claringbull on behalf of the Council, and the proposed similar representation to be made by the Vice-Chancellor of Birkbeck College, for exemption from the restrictions of the Radioactive Substances Act were reported.

Appreciation of the assistance of Dr. Howie and Mr. Embrey in checking page references of vol. 14, No. 8, index number of the *Mineralogical Abstracts* was expressed.

The Council agreed that an annual entertainment grant of £50 be made for a period of four years, when the question should be reviewed.

Dr. Campbell Smith's wish to resign from his appointment as the Society's representative on the Geological Conservancy Council was noted and the appointment of a successor was referred to the November meeting.

The advance notification from the Royal Entomological Society of London, the landlords of 41 Queen's Gate, of the necessity for their appropriation of the third floor on the expiration of the Society's tenancy in September 1962 was noted.

The retrospective re-appointment as Managing Trustees of Prof. C. E. Tilley for a period of five years from November 1958 and Dr. W. Campbell Smith for a period of five years from March 1959 were confirmed.

The outcome of the further representations made by the Royal Society/British Academy committee to the Minister for Science and Financial Secretary regarding the effects of the new Rating and Valuation Bill on learned societies was reported.

It was reported that the statement approved by the British and American Mineralogical Societies, and other documents had been circularized by the Abstracts Commission to all members of the Abstracts Commission and Secretaries of National Societies.

GENERAL MEETING

Held in the Apartments of the Geological Society, Burlington House, London W., 8 June 1961, at 5 p.m.

Prof. L. R. Wager, President, in the Chair.

Forty-seven Members and eight Visitors were present.

The elections of four Ordinary Members of the Society provisionally made by the Council were confirmed.

The following papers were read and discussed:

1. Some new platinoid-rich minerals, identified with the electron micro-analyser: by Dr. E. F. Stumpfl (vol. 32, p. 833).
2. Petrology of the Scourie dyke, Sutherland: by Dr. M. J. O'Hara (vol. 32, p. 848).
3. An X-ray examination of an exceptionally well-crystallized kaolinite: by Dr. J. Goodyear and Dr. W. J. Duffin (vol. 32, p. 902).
4. Electron-diffraction study of subsidiary maxima of scattered intensity in nepheline: by Dr. J. D. C. McConnell (vol. 33, p. 114).

The following paper was taken as read:

1. The kinetics of the low→high transformation in albite. I. Amelia albite under dry conditions: by Mr. D. McKie and Dr. J. D. C. McConnell.

The transformation was followed in Amelia albite powders by variation in $2\theta_{131}$ $2\theta_{1\bar{3}1}$ with time under isothermal conditions at various temperatures in the range 960° C to 1030° C. The activation energy of about 60 kcal. mole^{-1} is similar to that obtained for the ordering process in synthetic $NaAlSi_3O_8$ under hydrothermal conditions.

EXCERPT MINUTES OF COUNCIL MEETING

Held in the Apartments of the Geological Society, Burlington House, London W., 2 November 1961, at 3 p.m.

Dr. A. F. Hallimond, Vice-President, in the Chair.

Dr. M. C. Bandy was provisionally elected an Honorary Member of the Society, and the following as Ordinary Members: Alan Horrell Clark, Derek Ernest Coussell, Colin Thomas Cowan, John Alexander Vibert Douglas, Michael John Dumbleton, Ansel Charles Dunham, Alan Douglas Edgar, Malcolm Timothy Frost, Anthony Hall, Sa'ad el Din Hamad, Christopher Michael Bradford Henderson, Antonio Yose Rebholho Lapa,

Michael Anthony Lappin, Donald Angus Macleod, Harry Gordon Macpherson, Alastair William Nicol, Geoffrey Ronald Parslow, John Christopher Rucklidge, Adil Gidayatovich Seidov, Raymond Wey.

The death of Dr. Alexander Miers Macgregor was reported.

The resignation of Mr. W. F. Davidson was accepted.

Reports were received from the Treasurer, the Editors, the Clay Minerals Group, and the Publications Committee.

It was decided that Edinburgh should be the venue of the next Society meeting outside London; one day should be devoted to reading papers; and the date in September would be later determined.

The subsequent agreement by the Royal Entomological Society of London to renew the lease of the Society's offices at 41 Queen's Gate for a further five years, subject to their retention of one room, was noted.

Dr. Campbell Smith agreed to continue as the Society's representative of the Geological Conservancy Council pending the appointment of a successor.

It was reported that the Act controlling permissible Trustee Stock had come into force and the transfer to the Miers–Spencer Memorial Fund account of the Society was proceeding.

It was proposed that the handling of orders for back numbers of Clay Minerals Bulletin should be taken over by the Society's office at 41 Queen's Gate after January 1962; and subscriptions after July 1962. Circulars would continue to be handled in Cambridge.

Dr. Gard, present at the invitation of the Council, reported in detail the progress of the Electron Optical monograph.

The merging of the Topographical and General Indexes with a separate Authors' Index to volume 15 of *Mineralogical Abstracts* was agreed. The agreement by the Mineralogical Society of Bulgaria to abstract for *Mineralogical Abstracts* was reported; and volunteers to abstract from the Clay Minerals Bulletin were requested.

The $7\frac{1}{2}$ % increase in printing charges for both the *Mineralogical Magazine* and the *Mineralogical Abstracts* was reported.

For bulk orders of not less than ten monographs a 10 % discount to university departments, on application, was agreed.

It was reported that the Third General Meeting of the International Mineralogical Association would be held in Washington, D.C., from 11 April to 1 May 1962; with the possibility of a travel grant of $100.00 from the National Science Foundation to members of the Society to promote their attendance. Dr. R. A. Howie was appointed as deputy representative to the Abstracts Commission.

The Secretary read the draft of the Annual Report of the Council for the past year and this was approved for presentation to the ensuing Anniversary Meeting.

The appointment of auditors of the Society's accounts for the year ending 31 December 1961 was postponed until the January 1962 Council meeting.

The resignations of Mrs. E. M. Castle (Publications' Assistant), and of her successor, Mrs. J. M. Kohler, were reported.

The possibility of an increase in the fees charged for the use of the apartments of the Geological Society of London was reported.

GENERAL MEETING

Held in the Apartments of the Geological Society, Burlington House, London W., 2 November 1961, *at* 3 *p.m.*

Dr. A. F. Hallimond, Vice-President, in the Chair.

Seventy-nine Members and five Visitors were present.

The elections of twenty Ordinary Members of the Society provisionally made by the Council were confirmed.

The General Secretary read the following:

ANNUAL REPORT OF THE COUNCIL FOR 1960–1

Membership. The total membership on 31 October 1961 was 730 against 712 on 31 October 1960. Thirty-three new members have been elected during the year, ten members have resigned, and the name of one member has been removed on account of arrears of subscription. The Society has lost by death four Ordinary Members. On 31 October 1961 the membership consisted of five Honorary Members and 725 Ordinary Members, of whom 71 are Life Members; 351 members are also members of the Clay Minerals Group.

Meetings. The total attendance at the four general meetings held during the session 1960–1 was 232 members and 28 guests, giving an average of 65 per meeting. At these meetings 18 papers were read, 11 papers were taken as read, and 2 exhibits were shown.

At two meetings of the Clay Minerals Group (one held in London, and a joint meeting with the British Society of Soil Science in Cambridge) 19 papers were read: the average attendance was 67.

Publications. Three numbers of the *Mineralogical Magazine* have been issued during 1961, and the fourth (December 1961) is expected shortly. The four numbers (252–5) contain the Proceedings (16 pages), 21 papers, 10 short communications, and 19 book reviews in 324 pages with 8 plates and 69 text-figures in 61 blocks, together with the indexes in 15 pages. The December number (No. 255) will complete the volume. The index number to vol. 31 (No. 243) was distributed in September 1961. The December 1960 number of *Mineralogical Abstracts* (index number to

[*continued on p. lx*

MINERALOGICAL

INCOME AND EXPENDITURE ACCOUNT

A. GENERAL

1960 £	Income	£	*s.*	*d.*	£	*s.*	*d.*
	Members' subscriptions—						
	Annual subscriptions	1010	19	10			
	Entrance fees	33	0	0			
1003					1043	19	10
	Mineralogical Magazine						
	Advertisement fees	337	17	11			
	Sales	3070	10	6			
4365					3408	8	5
	Investment revenue						
	Interest on investments	243	16	10			
	Post Office Savings Bank interest	20	7	0			
260					264	3	10
	Clay Minerals Group—						
	Clay Minerals Bulletin:						
	Subscriptions	285	17	11			
	Sales, including authors' reprints	200	6	11			
658					486	4	10
	Clay Minerals Monographs:						
	Sales—*X-ray Identification and Crystal Structure of Clay Minerals*	317	15	8			
	The Differential Thermal Investigation of Clays	354	13	1			
568					672	8	9
1	*Glossary of Clay Trade Names*, sales					4	2
3	Advertisement				0	0	0
12	Interest on Bank Accounts (Harpenden and Cambridge)				12	10	11
£6870					£5888	0	9

B. MIERS–SPENCER

£		£	*s.*	*d.*
21	Investment revenue	20	10	8
£21		£20	10	8

OCIETY

OR THE YEAR ENDED 31 DECEMBER 1961

UND

960 £	Expenditure	£ s. d.	£ s. d.
	Mineralogical Magazine		
	Nos. 252–5, and cost in excess of estimate of No. 243:		
	Printing	1907 8 7	
	Illustrations	143 19 1	
	Authors' reprints	124 18 4	
	Distribution to members	85 12 9	
	„ „ subscribers	90 4 1	
896			2352 2 10
920	Reprinting Magazines		0 0 0
99	Editorial Expenses		64 10 5
	Contribution to *Mineralogical Abstracts* for Life and Hono-		
78	rary Members		77 0 0
	Subscriptions to International Mineralogical Association,		
32	1961–2		32 5 9
	Meeting expenses—		
	Notices of meetings	110 11 6	
	General expenses in connexion with meetings	34 17 6	
143			145 9 0
	General expenses—		
	Office rental and house expenses	301 10 0	
	Clerical assistance	1389 2 10	
	Printing and stationery	84 7 4	
	Postage and telephone	170 12 10	
	Sundry office expenses	44 12 8	
906			1990 5 8
3	Library binding charges		0 0 0
	Clay Minerals Group—		
	Clay Minerals Bulletin:		
	Printing Bulletins 24 and 25	259 15 6	
	Authors' reprints	31 6 0	
	Editorial expenses	10 0 0	
408			301 1 6
	Monograph expenses		65 17 6
	General expenses:		
	Notices of meetings	47 17 5	
	Expenses in connexion with meetings	29 0 6	
	Office expenses	175 2 4	
233			252 0 3
52	Balance, being excess of income over expenditure for the year		607 7 10
870			£5888 0 9

EMORIAL FUND

		£ s. d.
	Bank charges	3 8
21	Balance, being excess of income over expenditure for the year	20 7 0
£21		£20 10 8

March 1962

H. P. Rooksby, P. G. Embrey } Auditors

A. F. Seager, Hon. Treasurer

MINERALOGICAL

BALANCE SHEET AS AT

A. GENERAL

1960 £	Liabilities	£ s. d.	£ s. d.	£ s. d.
	Fund Account—			
	Balance per Balance Sheet at 31 December 1960	5961 11 0		
	Add Excess of income over expenditure for year ended 31 December 1961	607 7 10		
	Composition fee received	60 0 0		
			6628 18 10	
	Less Depreciation on office furniture and equipment	102 6 9		
	Transfer to *Mineralogical Abstracts* Fund	876 3 3	978 10 0	
5961				5650 8 10
1178	Publications Fund			1177 13 9
	Subscriptions, &c., received in advance—			
	Members' subscriptions and entrance fees		118 18 4	
	Subscriptions to *Clay Minerals Bulletin*		3 15 0	
111				122 13 4
	Sundry creditors—			
	Oxford University Press for Magazine No. 255		483 10 0	
	" " " " Authors' reprints, No. 254.		41 9 6	
	Royal Entomological Society for house expenses		31 18 7	
	Editor for sundry editorial expenses		114 10 5	
	Royal Society, for loan (Parliamentary Grant-in-aid for scientific publications)		750 0 0	
	Sundry expenses		1 7 0	
2260				1422 15 6
£9510				£8373 11 5

B. MIERS–SPENCER

£		£ s. d.	£ s. d.
	Fund Account—		
	Balance per Balance Sheet at 31 December 1960	839 2 10	
	Add Excess of income over expenditure for the year ended 31 December 1961	20 7 0	
839			859 9 10
£839			£859 9 10

OCIETY

DECEMBER 1961

UND

960

£	Assets	£ s. d.	£ s. d.
	Office furniture and equipment—		
	Original cost	1023 7 6	
523	*Less* depreciation	602 7 7	420 19 11
	Investments (at cost or as valued at 31 December 1951)		
	£2232. 9*s.* 3½ % War Stock 1952	1856 8 6	
	£753. 12*s.* 11*d.* 4 % Consolidated Stock 1957	694 4 9	
	£606. 4*s.* 6*d.* 4 % Funding Stock 1960–90	598 5 0	
	£250 3 % Savings Bonds 1960–70	216 17 6	
	£1013. 9*s.* 6*d.* 3 % Savings Bonds 1965–75	916 7 0	
	£173. 6*s.* 6*d.* 3 % British Transport Stock 1978–88	127 1 3	
	£275. 2½ % Consolidated Stock	169 2 6	
	£261. 12*s.* 6*d.* 3½ % Treasury Stock 1977–80	244 8 3	
	£1120. 16*s.* 7*d.* 4½ % British Electricity Stock 1967–9	1065 17 3	
889			5888 12 0
	Note:—The total market value of the above investments at 31 December 1961 was £4497. 11*s.* 8*d.*		
	Deposits—		
815	Balance with Post Office Savings Bank		835 3 10
	Subscriptions, &c., in arrears—		
	Members' subscriptions and entrance fees	172 18 0	
	Subscriptions to *Clay Minerals Bulletin*	22 10 0	
70			195 8 0
	Sundry debtors—		
	Purchasers of *Clay Minerals Bulletin* and authors' reprints		62 10 0
	Mineralogical Abstracts, for loan from Mineralogical Society of Great Britain		0 0 0
479			
	Cash—		
	Coutts & Co., London	403 19 1	
	Barclays Bank, Harpenden	528 0 8	
	Cambridge and District Trustee Savings Bank	10 15 1	
	Cash in hand, London	20 0 0	
	,, ,, ,, Harpenden	8 2 10	
734			970 17 8
510	Note:—The value of the Society's library and stock of publications is not included in the above assets.		£8373 11 5

EMORIAL FUND

£		£ s. d.	£ s. d.
	Investments (at cost)—		
	£504. 17*s.* 4*d.* 3½ % War Stock 1952	439 7 0	
	£208. 11*s.* 4½ % British Electricity Stock 1967–9	200 0 0	
639			639 7 0
	Note:—The total market value of the above investments at 31 December 1961 was £456. 18*s.* 5*d.*		
200	Cash—Coutts & Co., London		220 2 10
839			£859 9 10

March 1962

H. P. Rooksby, P. G. Embrey } Auditors

A. F. Seager, Hon. Treasurer

MINERALOGICAL SOCIETIES OF

MINERALOGICAL

INCOME AND EXPENDITURE ACCOUNT

1960 £	Income	£ s. d.	£ s. d.
	Subscriptions—		
	Mineralogical Society of America	555 18 11	
	Mineralogical Society of Great Britain . . .	745 0 0	
989			1300 18 11
1910	Sales		1905 9 3
1487	Balance, being excess of expenditure over income		316 10 6
£4386			£3522 18 8

BALANCE SHEET AS AT

£	Liabilities	£ s. d.	£ s. d.	£ s. d.
	Fund Account—			
	Balance per Balance Sheet at 31 December 1960	51 14 7		
	Add Capital contribution from Mineralogical Society of America . . .	876 3 3		
	Capital contribution from Mineralogical Society of Great Britain . .	876 3 3		
			1804 1 1	
	Less Depreciation on office furniture and equipment	11 14 3		
	Repayment of loan from Mineralogical Society of Great Britain . .	1350 0 0		
	Excess of expenditure over income for year ended 31 December 1961 .	316 10 6		
52			1678 4 9	
				125 16 4
67	Subscriptions received in advance			69 0 0
	Sundry creditors—			
17	Royal Entomological Society for house expenses		15 19 4	
	Metcalfe and Cooper, for *Abstracts*, Vol. 14, No. 8		889 3 1	
				905 2 5
£136				£1099 18 9

MERICA AND GREAT BRITAIN

BSTRACTS

OR THE YEAR ENDED 31 DECEMBER 1961

960

£	Expenditure	s.	d.	£	s.	d.
	Mineralogical Abstracts—					
	Vol. 14, No. 8; Vol. 15, Nos. 1 and 2:					
	Printing	2107	13 3			
183	Distribution	178	8 7			
				2286	1	10
	Editorial expenses—					
	Editor's Honorarium	400	0 0			
	Editorial Assistant's stipend	519	10 4			
970	General editorial expenses	66	18 4			
				986	8	8
	Office expenses—					
	Office rental and house expenses	144	18 9			
	Printing and stationery	81	9 3			
	Postage	15	17 5			
233	Sundry office expenses	8	2 9			
				250	8	2
386				£3522	18	8

DECEMBER 1961

£	Assets	s.	d.	£	s.	d.
	Office furniture and equipment—					
	Original cost	117	2 7			
94	*Less* Depreciation	35	2 9			
				81	19	10
29	Subscriptions in arrears			107	0	0
13	Cash—Coutts & Co., London			910	18	11
136				£1099	18	9

March 1962

H. P. Rooksby, P. G. Embrey } Auditors

A. F. Seager, Hon. Treasurer

vol. 14) was published in October 1961: it contains errata, addenda, and topographical and alphabetical indexes and consists of 82 pages of over 18 000 page references to 4161 abstracts and 119 book notices. Two numbers of volume 15 (Nos. 1 and 2) have been issued and contain 1427 abstracts or citations and 44 book notices in 168 pages. The third number (September 1961) should appear in November and contains about 680 abstracts and notices.

Two numbers (24 and 25) of the *Clay Minerals Bulletin* have been issued during the year. The X-ray monograph is expected to be published in November 1961, and work is proceeding on the Electron Optical monograph, and the Clay Mineralogy of British Sediments.

Financial. The accounts for the calendar year 1960 are published in *Mineralogical Magazine* No. 253. During the year income from the General Fund exceeded expenditure by £52. 2*s*. 7*d*. The excess of assets (exclusive of the Society's library and stock of publications) over liabilities at 31 December 1960 was £6800. 13*s*. 10*d*. against £6830. 8*s*. 4*d*. at the close of 1959.

Three numbers of the *Mineralogical Magazine* for 1961 have appeared, the first two of which cost £1073. 7*s*. 2*d*.; and two numbers of *Mineralogical Abstracts* published at a cost of £1395. 7*s*. 3*d*. The expense of reprinting two numbers of the *Mineralogical Magazine* has amounted to £269. 4*s*. 4*d*.

Sales of publications so far during 1961 are as follows: *Mineralogical Magazine* £2888. 2*s*. 0*d*., *Mineralogical Abstracts* £1794. 6*s*. 0*d*., Monographs £316. 13*s*. 8*d*.

The balances at the Society's Bankers and in the Post Office Savings Bank on 31 October 1961 were: General Fund £5222. 11*s*. 7*d*. Miers-Spencer Memorial Fund £211. 7*s*. 11*d*.

On the proposal of Mr. P. Embrey, seconded by Dr. W. S. MacKenzie, the adoption of the Annual Report was carried unanimously.

A vote of thanks to the Geological Society for the use of the apartments during the past session was proposed by Mr. T. Deans, seconded by Dr. S. O. Agrell, and carried with acclamation.

The President read the following list of Officers and Council elected for the session 1961–2 in accordance with by-law 20:

President. Prof. L. R. Wager, M.A., Sc.D., B.Sc., F.R.S.
Vice-Presidents. Dr. G. F. Claringbull, B.Sc., Ph.D., A.Inst.P., F.G.S.; Dr. A. F. Hallimond, M.A., Sc.D., F.G.S.
Treasurer. Dr. A. F. Seager, B.Sc., Ph.D., A.K.C., F.G.S.
General Secretary. Dr. J. R. Butler, M.A., Ph.D.
Foreign Secretary. Dr. W. Campbell Smith, C.B.E., M.C., T.D., M.A., Sc.D., F.G.S.
Editor of the Mineralogical Magazine. Dr. M. H. Hey, M.A., D.Sc.
Editor of Mineralogical Abstracts. Dr. J. Phemister, M.A., D.Sc., F.R.S.E., F.G.S.

Ordinary Members of the Council

Prof. W. A. Deer, M.Sc., Ph.D., F.G.S.
Prof. K. C. Dunham, D.Sc., Ph.D., S.D., M.I.M.M., F.G.S., F.R.S.
Mr. A. W. G. Kingsbury, F.G.S.
Dr. W. S. MacKenzie, M.A., B.Sc., Ph.D., F.R.S.E.
Dr. A. P. Millman, Ph.D., D.I.C., A.R.S.M., B.Sc., F.G.S.
Dr. I. D. Muir, B.A., Ph.D., F.G.S.
Dr. R. M. S. Perrin, M.A., B.Sc., Ph.D.
Mr. H. P. Rooksby, B.Sc., F.Inst.P.
Prof. J. H. Taylor, M.A., B.Sc., Ph.D., F.G.S., F.R.S.
Dr. W. J. Wadsworth, M.A., D.Phil., F.G.S.
Prof. F. Walker, M.A., Ph.D., D.Sc., F.R.S.E., F.G.S.
Dr. J. Zussman, M.A., Ph.D.

A vote of thanks to the retiring Members of Council was proposed by Dr. S. O. Agrell and seconded by Dr. W. S. Pitcher.

The following exhibit was shown:

Coffinite from various *in situ* localities in South-west England: by Dr. A. G. Darnley.

The following papers were read and discussed:

1. Pantelleritic liquids and their phenocrysts: by Mr. I. S. E. Carmichael (vol. 33, p. 86).
2. Beryllium minerals in Cornwall and Devon: helvine, genthelvite, and danalite: by Mr. A. W. G. Kingsbury (vol. 32, p. 921).
3. Quartz after tridymite in an acid intrusion from Mull: by Dr. R. S. Skelhorn (vol. 33, p. 138).

The following papers were taken as read:

1. Heat treatment of chevkinite and perrierite: by Mr. J. Lima-de-Faria (vol. 33, p. 42).
2. Twenty-second list of new mineral names: by Dr. M. H. Hey (vol. 32, p. 941).
3. The age of fergusonite from the Jos Area, Northern Nigeria: by Dr. A. G. Darnley and Messrs. G. H. Smith, T. R. D. Chandler, and D. F. Dance (vol. 33, p. 48).
4. Ferrodiorite from the Isle of Skye: by Prof. L. R. Wager and Dr. E. A. Vincent (vol. 33, p. 26).

PROCEEDINGS

OF THE

MINERALOGICAL SOCIETY

(1962)

EXCERPT MINUTES OF COUNCIL MEETING

Held in the Apartments of the Geological Society, Burlington House London W., 25 January 1962, at 3 p.m.

Prof. L. R. Wager, President, in the Chair

The following were provisionally elected Ordinary Members of the Society: James Andrew Bain, Gwyneth Alva Challis, John Leonard Daniels, Lucien Cedric Fordon-Bellgrove, Mario Fornaseri, Clarence Marvin Jenni, Dietrich Dankwart Klemm, William Francis Moll, Brian Albert Sturt, John William Tlapek, William Uytenbogaardt, Robert Eugene Winchell, Alan Robert Woolley. Further, Prof. Tei-ichi Ito, Prof. Felix Karl Ludwig Machatschki, and Prof. Paul Ramdohr were provisionally elected Honorary Members.

The death of Dr. Harold Eugene Buckley was reported.

The resignations of Mr. C. M. Gregory, Mr. R. A. A. Johnston, Mr. P. H. Ribbe, and Dame Kathleen Lonsdale were accepted. Dr. Claringbull's offer to inquire whether Dame Kathleen Lonsdale might withdraw her resignation was approved.

The receipt of a remittance from Prof. J. L. Kulp in excess of the arrears for which he was removed in March 1961 was reported. His renewal of membership, if he so desired, was authorized.

Reports were received from the Treasurer, the Editors, and the Clay Minerals Group: Offers to co-operate in abstracting from Prof. E. Sanero (Italy), and Frau Dr. Isa Kubach (Germany) had been received; and the appointment of Mearns Publicity, Aberdeen, as agents for advertising in the *Clay Minerals Bulletin* was noted.

The appointments to represent the Society, and to Commissions at the Third General Meeting of the International Mineralogical Association in

Washington were confirmed, as follows: Dr. J. R. Butler (Delegate), Dr. R. A. Howie (Abstracts), Mr. E. A. Jobbins (Mineral Data), Dr. M. H. Hey (New Minerals), Mr. P. G. Embrey (Museums), and Dr. C. H. Emeleus (Teaching). It was noted that the President had applied to the Royal Society for a grant towards the cost to members of attending this meeting.

The dates 27–28 September 1962 were confirmed for the Meeting of the Society to be held in Edinburgh; papers would be read on Thursday: and excursions, possibly to Arthur's Seat, the Royal Scottish Museum, and localities in the East Lothians, would be on Friday, and perhaps Saturday.

The Secretary's further representation to the Ministry of Housing and Local Government for exemption from the Radioactive Substances Act, 1960, was reported.

Mr. A. W. G. Kingsbury was appointed to succeed Dr. W. Campbell Smith as the Society's representative to the Geological Conservancy Council.

Mr. H. P. Rooksby and Mr. P. G. Embrey were appointed auditors of the Society's accounts for the year ending 31 December 1961.

The appointment of Mrs. M. E. Robinson as Publications Assistant was noted.

It was agreed that notice of the International Geological Congress, to be held in India in December 1964, should be included in a future Notice of the Society.

GENERAL MEETING

Held in the Apartments of the Geological Society, Burlington House London W., 25 January 1962, at 5 p.m.

Prof. L. R. Wager, President, in the Chair

Forty-three Members and nine Visitors were present.

The elections of thirteen Ordinary Members and three Honorary Members of the Society provisionally made by the Council were confirmed.

The following exhibits were shown:

1. Variscite from High Down Quarry, Filleigh, near South Molton, and from Pitts Cleave Quarry, Tavistock (both in Devon).

2. Strengite from Wheal Phoenix, Linkinhorne, Cornwall, and from Burdell Gill, Caldbeck, Cumberland: by Mr. Arthur Kingsbury.

The following papers were read and discussed:

1. Chinese mineralogical and petrological terminology. Part 1. Mineralogy: by Mr. A. C. Barnes, Dr. J. E. S. Bradley, and Dr. Olive Bradley.

2. Optical determination of aegirine-augite with the universal stage: by Prof. B. C. King (vol. 33, p. 132).

3. Metamorphic pyroxenes from the Broken Hill district, N.S.W., Australia: by Mr. R. A. Binns (vol. 33, p. 320).

4. Goyazite and florencite from two African carbonatites: by Dr. Duncan McKie (vol. 33, p. 281).

The following papers were taken as read:

1. Powellite from Traprain Law, Haddingtonshire, Scotland: by Dr. M. H. Battey and Dr. A. A. Moss (vol. 33, p. 158).

2. The crystal chemistry of ettringite: by Dr. Duncan McConnell and Dr. Joseph Murdoch (vol. 33, p. 59).

3. Extinction Curves and 2V: a stereographic solution: by Dr. F. E. Tocher (vol. 33, p. 52).

EXCERPT MINUTES OF COUNCIL MEETING

Held in the Apartments of the Geological Society, Burlington House London W., 22 March 1962, at 3 p.m.

Prof. L. R. Wager, President, in the Chair

The following were provisionally elected Ordinary Members of the Society: David Atkin, Richard Lee Berger, Graham Alan Chinner, William Elrick Fraser, Moyle E. Harward, Alfred Abraham Levinson, Dorian Glen Whitney Smith, Marc Bernard Vuagnat, and Peter Charles Wright.

It was reported that Prof. J. L. Kulp had written regretting his inability to continue as a member and requesting that his excess payment be considered a donation to the Society.

Reports were received from the Treasurer, the Editors, the Clay Minerals Group, and the Publications Committee. The Treasurer presented the audited accounts for 1961, which were approved (vol. 33, pp. liv–lix).

Prof. J. H. Taylor suggested that those subscribers to the *Magazine* who did not also subscribe to the *Abstracts* be induced to do so.

It was reported that Dr. J. McAndrew had written proposing measures to improve the existing arrangements for abstracting in Australia.

The Council expressed its regret on Dr. Campbell Smith's resignation as a Managing Trustee, and thanked him for the many years he had served the Society in this capacity. Prof. J. H. Taylor was appointed to succeed Dr. Campbell Smith as a Managing Trustee.

It was agreed that the Bye-Laws be changed to include the Publications Manager as an Officer of the Society.

The Council considered two detailed alternative proposals by Dr. A. F. Seager for the future of the joint publication, *Mineralogical Abstracts*; and agreed that these be submitted to the Mineralogical Society of America for their consideration.

It was suggested that the question of advertising in the *Mineralogical Abstracts* be raised at the forthcoming joint meeting of the British and American Societies in Washington.

The question of increased subscription by the British Society was referred to the June meeting of the Council.

The President reported that the Royal Society had made a contribution of £300 towards the costs of members attending the I.M.A. meeting in Washington, the allocation of which had been made.

Dr. M. H. Hey was authorized to publish the findings of the Nomenclature Commission of the I.M.A. in a Short Communication in the *Mineralogical Magazine*.

GENERAL MEETING

Held in the Apartments of the Geological Society, Burlington House London W., 22 March 1962, *at* 5 *p.m.*

Prof. L. R. Wager, President, in the Chair

Thirty-seven Members and ten Visitors were present.

The elections of nine Ordinary Members of the Society provisionally made by the Council were confirmed.

The following papers were read and discussed:

1. Garronite, a new zeolite, from Ireland and Iceland: by Dr. G. P. L. Walker, with analyses by Mr. I. S. E. Carmichael (vol. 33, p. 173).

2. Crystallographic study of chrysotile dehydration in air and under hydrothermal conditions: by Mr. M. C. Ball and Dr. H. F. W. Taylor (vol. 33, p. 467).

3. Strontium in plagioclase feldspars from four layered basic masses in Somalia: by Dr. J. R. Butler and Dr. W. Skiba (vol. 33, p. 213).

4. The dehydration of bultfonteinite: by Dr. E. C. McIver.

The pseudo-monoclinic mineral bultfonteinite, $Ca_4Si_2O_{10}F_2H_6$, undergoes a phase change at 390° C to a monoclinic form in which some of the hydrogen ions are disordered. The monoclinic form is unstable and slowly dehydrates to an oriented crystal of cuspidine. A mechanism is suggested that requires that all the anions have an equal chance of being removed as water and not necessarily those that have been identified as water molecules in the structure. The cations are considerably rearranged, but the main features of the anion framework are preserved.

5. Some petrological aspects of order-disorder in feldspars: by Dr. A. S. Marfunin (vol. 33, p. 298).

The following papers were taken as read:

1. The production of wooden replicas of natural crystals: by Mr. G. G. Brebner and Dr. F. E. Tocher (vol. 33, p. 162).

2. Owyheeite from Rivertree, New South Wales: by Dr. L. J. Lawrence (vol. 33, p. 315).

3. The ageing of sesquioxide gels. II. Alumina gels: by Dr. R. C. Mackenzie, Dr. R. Meldau, and Dr. J. A. Gard (vol. 33, p. 145).

4. Location of argon and water in cordierite: by Dr. J. V. Smith and Mr. W. Schreyer (vol. 33, p. 226).

5. Observations on the rhombic section of a zoned plagioclase crystal: by Dr. Joseph A. Vance (vol. 33, p. 125).

6. Low-potash gismondine from Ireland and Iceland: by Dr. G. P. L. Walker, with analysis by Mr. I. S. E. Carmichael (vol. 33, p. 187).

EXCERPT MINUTES OF COUNCIL MEETING

Held in the Apartments of the Geological Society, Burlington House London W., 7 June 1962, *at* 3 *p.m.*

Prof. L. R. Wager, President, in the Chair

The following were provisionally elected Ordinary Members of the Society: Arthur Oren Beall, Ronald Berlin, Keith Chaperlin, William Frederick Cole, Ian MacFarlane Gray, Lewis James Monkman, Duane Milton Moore, John James Ravenscroft Patrick, George Robert Rapp, and John Starkey.

The names of Mr. T. E Brown, Mr. D. J. Shearman, Mr. R. D. Stevens, Mr. M. S. Venkatram, and Dr. R. Walls were removed from the list of members for non-payment of subscriptions.

Reports were received from the Treasurer, the Editors, and the Clay Minerals Group. It was agreed that the Central Press Ltd., Aberdeen,

should be given the contract for printing the Electron Optical Monograph. In view of questions of staff and space at the London office of the Society, Dr. Perrin was authorized to explore the possibility of a subscription agency undertaking the work of sales of back numbers of the *Bulletin*.

It was reported that subsequent to representations to the Ministry of Housing and Local Government regarding the implementation of the Radioactive Substances Act, 1960, information had been received that the Museum Exemption Order and the Thorium and Uranium Compounds Exemption Order were under preparation. The terms of these orders would not become effective in less than one year.

The Secretary reported on the attendance of the delegates and members at the I.M.A. meeting in Washington on 17–20 April 1962. Two field trips were taken: symposia had been on layered intrusions and on the mineralogy of sulphides; and two new commissions on Ore Microscopy and on Cosmic Mineralogy were formed.

The Secretary reported that the overall feeling of the Commission on Abstracts, Washington, was to maintain the *status quo*, with the Anglo-American organization expanding coverage country by country. The Council agreed that the names of the national mineralogical societies co-operating in abstracting be printed in the inside cover and opening page of *Mineralogical Abstracts*, commencing vol. 16, March 1963.

The Editor reported on the decisions of the I.M.A. Commission on New Minerals and Mineral Names. In the selection of the use of alternative names the Council favoured 'sphalerite' and 'siderite'.

The Council requested that the Secretary continue to act as the Society's Representative on the I.M.A., unless he finds he cannot continue to do so.

The Secretary was directed to convey to the Royal Society the Council's appreciation for their grant of £300 towards the cost of members attending the I.M.A meeting in Washington.

It was reported that the Council of the Mineralogical Society of America had agreed to a slight modification of one of the proposals submitted by the Treasurer for the future running of the *Mineralogical Abstracts*: an increase of 10*s*. in the British Society's membership subscription would be added to the existing allocation to *Mineralogical Abstracts*; the subscription of M.S.A. members (non-members of the British Society) would be raised to $4.50, this price also applying to all members of co-operating societies; the annual subscription to all subscribers (non-members) would be raised to £4. 4*s*.

The Council authorized the number of *Mineralogical Magazines* printed to be increased from 1800 to 2000 per issue, commencing with June 1962 number.

The Council agreed that membership subscription should be increased to £3. 10*s*. per annum to commence 1 January 1963.

The following dates for meetings in 1963 were agreed subject to the apartments of the Geological Society being available: 24 January, 28 March, 6 June, 7 November.

The Council agreed that a committee be set up to examine the development of new fields of interest to the Society, with especial reference to reflected light mineralogy, and the possibility of forming a group in this field. The following were elected to this committee: Prof. W. A. Deer, Prof. K. C. Dunham, Dr. A. F. Hallimond, and Dr. A. P. Millman, with Mr. S. H. U. Bowie (Secetary). It was proposed that a notice of this committee be inserted in the following Meeting Notice. It was decided to increase the size of the existing *Mineralogical Magazine* to cover these new fields of interest.

GENERAL MEETING

Held in the Apartments of the Geological Society, Burlington House London, W., 7 June 1962 at 5 p.m.

Prof. L. R. Wager, President, in the Chair

Thirty-four Members and five Visitors were present.

The elections of ten Ordinary Members of the Society provisionally made by the Council were confirmed.

The following exhibits were shown:

1. Nordstrandite, $Al(OH)_3$, with goethite, quartz, and minor diaspore, stibiconite, cinnabar, and gold in soil from West Sarawak: by Mr. T. Deans.

2. A simple polishing machine: by Dr. A. F. Hallimond.

The following papers were read and discussed:

1. Amphiboles from the Younger Granites of Nigeria. Pt. 1. Chemical classification: by Mrs. Gloria Borley (vol. 33, p. 358).

2. The chemistry and mineralogy of the olivine nodules of Calton Hill, Derbyshire: by Mr. S. el D. Hamad (vol. 33, p. 483).

3. Cobaltic hydroxide in nature: by Dr. M. H. Hey (vol. 33, p. 253).

4. Metamorphosed amygdales from 'S Airde Beinn, Mull: Pt. 1. Amygdales originally containing calcite: by Mr. J. R. Cann.

Amygdales in basalts metamorphosed by the plug of 'S Airde Beinn, in northern Mull, show high temperature mineral assemblages. The amygdales originally contained calcite, which is now represented by anhydrous calcium silicates: larnite, rankinite, and wollastonite. Silica required for the formation of these minerals has been introduced from the surrounding basalt, giving rise to concentric monomineralic zones decreasing in silica content towards the centre. At a later stage movement of Mg and Al occurred into the amygdales, and of Ca outwards, with the formation of melilite replacing both the calcium silicates and the basalt. Aegirine–augite crystallizes rimming the amygdales.

The following papers were taken as read:

1. The Wairarapa Valley, New Zealand, chondrite: by Dr. M. H. Battey (vol. 33, p. 73).

2. Framework structures formed from parallel four- and eight-membered rings: by Dr. J. V. Smith and Dr. F. Rinaldi (vol. 33, p. 202).

3. Low-temperature thermal effects in natural volcanic glasses due to strain: by Dr. A. Ewart and Dr. M. Fieldes (vol. 33, p. 237).

4. An improved technique for producing thin rock-sections: by Dr. A. C. Bishop (vol. 33, p. 247).

5. The origin of stannite by replacement of cassiterite in the Turkaňk zone of the Kutná Hora ore district: by Dr. F. Novák, Dr. A. Blüml, and Dr. A. Tacl (vol. 33, p. 339).

GENERAL MEETING

Held in the Apartments of the Grant Institute of Geology, King's Buildings, West Mains Road, Edinburgh 9, 27 *September* 1962 *at* 3 *p.m.*

Prof. L. R. Wager, President, in the Chair

Forty-three Members and five Visitors were present.

The following papers were read and discussed:

1. An electron diffraction study of the zeolite mordenite: by Dr. J. A. Gard.

Mordenite from Jordan Valley, Oregon, has been examined with single crystal electron diffraction. In general the orthorhombic unit cell proposed by Waymouth, with a 18·25 b 20·35 c 7·50 Å, was confirmed, but there is evidence that this may be only a pseudo-cell, and that a and b should both be doubled in the true cell. In addition, diffraction patterns from crystals lying with (100) and (010) normal or nearly normal to the electron beam show that $h0l$ reflections with l odd are present as continuous streaks parallel to a^*. This throws some doubt on the (100) glide plane found by Waymouth *et al.*, and reveals considerable disorder.

2. Monochromator or Graded Spectrum Filter?: by Dr. N. Holgate (vol. 33, p. 512).

3. A differential thermal study of the chlorites: by Dr. Wm Revell Phillips (vol. 33, p. 404).

4. The occurrence of magnesian pyroxenes and magnetite in porphyritic acid glasses: by Dr. I. S. E. Carmichael (vol. 33, p. 394).

5. Rosasite, aurichalcite, and associated minerals from Heights of Abraham, Matlock Bath, Derbyshire, with a note on infra-red spectra: by Dr. R. S. W. Braithwaite and Mr. George Ryback (vol. 33, p. 441).

6. Lamprophyre dykes from Argyll: by Dr. M. J. Gallagher (vol. 33, p. 415).

7. Some observations on igneous ferrohastingsites: by Mrs. Gloria Borley and Mr. M. T. Frost.

8. Some orthopyroxenes from Scottish metamorphic rocks: by Dr. R. A. Howie.

A field excursion was arranged on 28 September 1962 and led by Prof. F. H. Stewart: the items included: Kidlaw quarry, Traprain Law, Garleton Hills, and North Berwick shore.

EXCERPT MINUTES OF COUNCIL MEETING

Held in the Apartments of the Geological Society, Burlington House London W., 8 November 1962, at 3 p.m.

Prof. L. R. Wager, President, in the Chair

The following were provisionally elected Ordinary Members of the Society: Norman Simpson Angus, George William Bailey, Reginald Edward Keith Benjamin, Anthony Eric Beswick, Edward Brennan, Allan Fielding Burns, Charles William Claxton, Peter McLaren Donald Duff, Anthony Meredith Evans, M. Charles Gilbert, Timothy Bance Greenland, Peter Ralph Hooper, Marion Lercy Jackson, Edward Leon Philip Mercy, Sergio Morgante, Martin Munroe, Peter O'Neill, Charles Bertram Sclar, Karl-Heinz Ludwig Sehlke, Diana Stephanie Sutherland, Alec Francis Trendall, Brian Geoffrey Johnson Upton, Ronald Holden Vernon, and Geoffrey Walton.

The death of Prof. Khabib M. Abdullaev was reported.

Reports were received from the Treasurer, the Editors, the Clay Minerals Group, the Publications Committee, and the Sub-Committee on New Fields of Interest to the Society. A standing Sub-Committee

(to be reviewed annually) to promote the interests of ore mineralogy was appointed as follows: Mr. S. H. U. Bowie, Prof. W. A. Deer, Mr. C. F. Griffiths, Dr. A. F. Hallimond, Dr. N. F. M. Henry, Dr. A. P. Millman, Mr. R. Phillips, and Dr. E. Stumpfl. A further standing Sub-Committee to consider aspects of Isotope Geochemistry was appointed as follows: Mr. S. H. U. Bowie, Dr. J. R. Butler, Prof. C. Davidson, Mr. J. Miller, Dr. S. Moorbath, Dr. A. Smales, Prof. E. A. Vincent, and Prof. L. R. Wager.

Arising out of the Publications Committee's report the Council agreed that: 50 reprints should be issued to authors free of charge, and, if too expensive, their covers dispensed with ; part-time clerical assistance be secured for the *Abstracts* ; the question of printing a second edition of the Differential Thermal Analysis monograph be referred to the editor, Dr. R. C. Mackenzie ; and the printers of the X-ray monograph to print 1000 copies of the monograph before destroying the type set. The Council noted that Mrs. E. Smith had been appointed as clerk to the Publications Department. The Secretary was authorized to go further into the matter of the offer by Messrs. Dawson & Sons to publish and distribute specified back numbers of the *Mineralogical Magazine*. Possible increased printing charges from the printers of the *Abstracts* were intimated.

Dr. Hey expressed his wish to stand down from the I.M.A. Mineral Data Commission.

The Council expressed its appreciation to Prof. F. H. Stewart and Dr. J. Wadsworth for organizing the meeting of the Society in Edinburgh on 27–28 September 1962.

It was decided to hold a meeting in Manchester during the coming summer, possibly in September 1963.

Dr. Perrin reported on the clerical assistance he had secured to deal with the sales work of the *Bulletin*.

The Secretary read the draft of the Annual Report of the Council for the past year, and this was approved for presentation to the Society at the ensuing Anniversary Meeting.

It was agreed that Oxford University Press be asked to continue to store the blocks relating to back numbers of the *Mineralogical Magazine*.

The Secretary reported that the Royal Entomological Society of London, the landlords of the Society's offices at 41 Queen's Gate, London S.W. 7, had offered a new lease, on terms which differed in various respects from the previous lease. The Council authorized the lease to be signed by the Managing Trustees.

GENERAL (ANNIVERSARY) MEETING

Held in the Apartments of the Geological Society, Burlington House London W., 8 November 1962, at 3 p.m.

Prof. L. R. Wager, President, in the Chair

Seventy-seven Members and seven Visitors were present.

To make provision for the proposed increase of membership subscription, and for the inclusion of the Publications Manager as an Officer of the Society, the following amendments were put to the Meeting:

Bye-law 5: Ordinary Members shall pay an entrance fee of £1 and annual subscription of £3. 10*s*. They shall be entitled to compound for the annual subscription by a single payment of £60, but Members who have paid their annual subscriptions for fifteen years shall be entitled to compound for £50, and those who have paid such subscriptions for twenty-five years shall be entitled to compound for £40, provided always that no Member shall be entitled to compound who is in arrear with his annual subscription for the preceding calendar year.

Bye-law 11: The Society shall be governed by a Council consisting of a President, two Vice-Presidents, a General Secretary, a Foreign Secretary, a Treasurer, the Editors of the *Journal* and *Abstracts*, the Publications Manager, and twelve Ordinary Members, who shall be elected annually, together with the preceding President,[1] who shall be entitled to remain on the Council for three years from the date of his retirement from the Chair, and, *ex officio*, the Managing Trustees of the Society.

Bye-law 12: The President, General Secretary, Treasurer, Editors of the *Journal* and *Abstracts*, and the Publications Manager shall be deemed the Officers of the Society.

The elections of twenty-four Members of the Society provisionally made by the Council were confirmed.

The General Secretary read the following:

ANNUAL REPORT OF THE COUNCIL FOR 1961-62

Membership. The total membership on 31 October 1962 was 772 against 730 on 31 October 1961. Fifty-five new members have been elected during the year, six members have resigned, and the names of five members have been removed on account of arrears of subscription. The Society has lost by death two Ordinary Members. On 31 October 1962 the membership consisted of 9 Honorary Members and 763 Ordinary Members, of whom 71 are Life Members. 367 members are also members of the Clay Minerals Group.

[1] Presidents who were elected previous to the date (1948) of the passing of this Bye-law may remain Life Members of the Council as provided in the original Bye-laws revised in 1931 and 1940.

Meetings. The total attendance at the five general meetings held during the session 1961–62 was 236 members and 34 guests, giving an average of 54 per meeting. At these meetings 24 papers were read, 18 papers were taken as read, and 5 exhibits shown.

At two meetings of the Clay Minerals Group, held in London and Leeds, respectively, twenty papers were read: the average attendance was 38.

Publications. Three numbers of the *Mineralogical Magazine* have been issued during 1962, and the fourth (December 1962) is expected shortly. The four numbers (256–259) will contain Bye-laws and List of Members in 44 pages, Proceedings for 1961 (17 pages), 34 papers, 8 short communications, and 11 book reviews in 352 pages with 3 plates and 111 text figures. Four numbers, including the December 1961 number, of *Mineralogical Abstracts* have been issued during 1962 and contain 2782 items in 324 pages. The December 1962 number will be the Index to volume 15.

Two numbers (26 and 27) of the *Clay Minerals Bulletin* have been issued during the year. The X-ray monograph was published in December 1961.

Financial. The accounts for the calendar year 1961 are published in *Mineralogical Magazine* no. 257 (June). During the year income from the General Fund exceeded expenditure by £607. 7*s*. 10*d*. The excess of assets (exclusive of the Society's library and stock of publications) over liabilities at 31 December 1961 was £6509. 18*s*. 8*d*. against £6800. 13*s*. 10*d*. at the close of 1960.

Three numbers of the *Mineralogical Magazine* for 1962 have appeared, the first two of which cost £1316. 12*s*. 7*d*. (including Bye-laws and Lists of Members); and three numbers of *Mineralogical Abstracts*, the first two of which cost £1535. 11*s*. 7*d*. The printing of the second edition of the monograph 'X-ray identification and crystal structures of clay minerals' cost £2856. 2*s*. 6*d*.

Sales of publications so far during 1962 are as follows: *Mineralogical Magazine* £2008. 14*s*. 8*d*., *Mineralogical Abstracts* £1592. 8*s*. 8*d*., X-ray monograph £3538. 14*s*. 4*d*., D.T.A. monograph £269. 6*s*. 1*d*.

Ashcroft Bequest. The late Mr. F. N. Ashcroft left a sum of £100 to Dr. W. Campbell Smith for the purpose of completing the cataloguing of the Ashcroft Collection in the British Museum (Natural History), the residue from which was to be given to the Mineralogical Society. The income of the fund has been used to pay for work on the collections. The capital has been invested in £100 Esso Petroleum Co. 5½% Debenture shares. These have now been transferred to the Society by Dr. W. Campbell Smith. The Council decided to add these shares to the Miers–Spencer Memorial Fund.

The balances at the Society's Bankers and in the Post Office Savings Bank on 31 October 1962 were: General Fund £2802. 12*s*. 2*d*., Miers–Spencer Memorial Fund £234. 12*s*. 9*d*.

General. (i) *Managing Trustee.* Dr. Campbell Smith has resigned as a Managing Trustee to the Society and has been succeeded by Prof. J. H. Taylor.

(ii) *International Mineralogical Association.* The Third General Meeting and Congress of the International Mineralogical Association was held in Washington, D.C., from 11 April to 1 May 1962. The Secretary was the Society's voting delegate. A generous grant from the National Science Foundation enabled participants from Europe to travel to Washington at a return fare of under £55. Several of our members took advantage of a further offer of $100.00 by the N.S.F. The Royal Society gave financial support to a delegation of 7 members of the Society and the Society was thereby enabled to be represented on all the Commissions of the I.M.A.

(iii) *Meeting outside London.* In response to various requests over the years the Society agreed to hold a meeting outside London; Edinburgh was the chosen venue. One afternoon and evening was devoted to the reading of papers with discussion.

On the following day a field excursion led by Prof. F. H. Stewart was arranged. The Council are in favour of holding other occasional meetings outside London from time to time.

On the proposal of Dr. P. A. Sabine, seconded by Dr. E. H. C. Rutland, the adoption of the Annual Report was carried unanimously.

A vote of thanks to the Geological Society for the use of the apartments during the past session was proposed by Mr. T. Deans, seconded by Dr. C. H. Emeleus, and carried with acclamation.

The President read the list of the Officers, Vice-Presidents, Foreign Secretary, and Ordinary Members of the Council elected for the session 1962–3 in accordance with bye-law 20:

President. Prof. L. R. Wager, M.A., Sc.D., B.Sc., F.R.S.
Vice-Presidents. Dr. G. F. Claringbull, B.Sc., Ph.D., A.Inst.P., F.G.S.; Prof. K. C. Dunham, D.Sc., Ph.D., S.D., M.I.M.M., F.R.S., F.G.S.
Treasurer. Dr. A. F. Seager, B.Sc., Ph.D., A.K.C., F.G.S.
General Secretary. Dr. J. R. Butler, M.A., Ph.D.
Foreign Secretary. Dr. W. Campbell Smith, C.B.E., M.C., T.D., M.A., Sc.D., F.G.S.
Editor of the Mineralogical Magazine. Dr. M. H. Hey, M.A., D.Sc.
Editor of Mineralogical Abstracts. Dr. J. Phemister, M.A., D.Sc., F.R.S.E., F.G.S.

Ordinary Members of Council

Dr. T. W. Bloxam, B.Sc., Ph.D., F.G.S.
Mr. S. H. U. Bowie, B.Sc.
Prof. W. A. Deer, M.Sc., Ph.D., F.R.S., F.G.S.
Mr. A. W. G. Kingsbury, F.G.S.
Dr. A. P. Millman, B.Sc., D.I.C., A.R.S.M., Ph.D., F.G.S.
Mr. R. Phillips, B.Sc.
Mr. H. P. Rooksby, B.Sc., F.Inst.P.
Dr. E. Stumpfl, Dr. rer. nat.
Prof. J. H. Taylor, M.A., B.Sc., Ph.D., F.R.S., F.G.S.
Dr. W. J. Wadsworth, M.A., D.Phil., F.G.S.
Prof. F. Walker, M.A., Ph.D., D.Sc., F.R.S.E., F.G.S.
Dr. J. Zussman, M.A., Ph.D.

A vote of thanks to the retiring Vice-President (Dr. A. F. Hallimond) and Members of Council was proposed by Dr. R. A. Howie and seconded by Dr. A. A. Moss.

The following papers were read:

1. The spectrochemical determination of feldspars within the fields microcline–albite and albite–labradorite: by Dr. W. E. Fraser and Mr. G. Downie.

A comprehensive investigation of the spectral lines of constituents of feldspars has shown the possibility of rapid feldspar determination, accurate to within 3 % Or, Ab, or An in the fields microcline–albite and albite labradorite. Samples are burned in a d.c. arc using cathode excitation and the intensities of four Na, five Ca, and three K lines are estimated visually on the recorded spectrogram. The

[*continued on p. lxxii*

MINERALOGICAL

INCOME AND EXPENDITURE ACCOUNT

A. GENERAL

1961 £	Income	£ s. d.	£ s. d.
	Members' subscriptions—		
	Annual subscriptions	1102 5 9	
	Entrance fees	50 0 0	
1044			1152 5 9
	Mineralogical Magazine—		
	Advertisement Fees	58 9 1	
	Sales	2722 17 6	
3408			2781 6 7
	Investment revenue—		
	Interest on investments	240 19 4	
	Post Office Savings Bank interest	20 17 6	
264			261 16 10
	Sundry income		11 6
	Clay Minerals Group—		
	Clay Minerals Bulletin:		
	Subscriptions	283 3 9	
	Sales, including authors' reprints	25 8 8	
486			308 12 5
	Clay Minerals Monographs:		
	Sales—2nd ed. *X-ray Identification and Crystal Structures of Clay Minerals*	4178 7 4	
	The Differential Thermal Investigation of Clays	371 18 1	
673			4550 5 5
	Glossary of Clay Trade Names, sales		8 4
13	Interest on Bank Accounts (Harpenden and Cambridge)		4 19 1
£5888			£9060 5 11

B. MIERS–SPENCER

£		£ s. d.
21	Investment revenue	25 1 11
	Bequest from Mr. F. N. Ashcroft	100 0 0
£21		£125 1 11

C. CLAY MINERALS GROUP

	£ s. d.
Donations	61 7 11
From the Mineralogical Society	50 0 0
Interest on Bank Account	1 17 3
	£113 5 2

OCIETY

OR THE YEAR ENDED 31 DECEMBER 1962

UND

961 £	Expenditure	£ s. d.	£ s. d.
	Mineralogical Magazine—		
	Nos. 256–259:		
	Printing	1850 4 7	
	Illustrations	166 2 4	
	Authors' reprints	239 11 0	
	Distribution to members	113 15 7	
	Distribution to subscribers	115 17 8	
352			2485 11 2
65	Editorial Expenses		55 0 0
77	Contribution to *Mineralogical Abstracts* for Life and Honorary Members		82 0 0
32	Subscriptions to International Mineralogical Association 1962		0 0 0
	Meeting expenses—		
	Notices of Meetings	161 18 6	
	General expenses in connection with meetings	34 14 6	
146			196 13 0
	General expenses—		
	Office rental and house expenses (including decorations)	454 7 9	
	Clerical assistance	1306 8 1	
	Printing and stationery	36 4 4	
	Postage and telephone	229 16 5	
	Sundry office expenses	108 2 7	
	Contribution to Clay Minerals Group Foreign Delegates Expenses Fund	50 0 0	
990			2184 19 2
	Clay Minerals Group—		
	Clay Minerals Bulletin:		
	Printing Bulletins Nos. 26 and 27 and authors' reprints	438 6 6	
	Reprinting Bulletin No. 11	43 19 7	
	Editorial expenses	0 0 0	
301			482 6 1
66	Monograph expenses		2874 10 0
	General expenses:		
	Notices of meetings	46 19 6	
	Expenses in connection with meetings	19 4 0	
	Office and clerical expenses	222 3 8	
	Secretary's expenses	10 18 0	
252			299 5 2
607	*Balance*, being excess of income over expenditure for the year		400 1 4
888			£9060 5 11

EMORIAL FUND

£		£ s. d.
	Bank charges	1 8
21	*Balance*, being excess of income over expenditure for the year	125 0 3
£21		£125 1 11

OREIGN DELEGATES EXPENSES FUND

	£ s. d.
Balance, being excess of income over expenditure for the year	£113 5 2

We are of the opinion that the growing costs of the *Clay Minerals Bulletin* require examination.

H. P. Rooksby } Auditors
P. G. Embrey }

March 1963

A. F. Seager, *Hon. Treasurer*

MINERALOGICAL

BALANCE SHEET AS AT

A. GENERAL

1961 £	Liabilities	£ s. d.	£ s. d.	£ s. d.
	Fund Account—			
	Balance per Balance Sheet at 31 December 1961 .	5650 8 10		
	Add Excess of income over expenditure for year ended 31 December 1962 . . .	400 1 4		
	Composition fee received	60 0 0		
			6110 10 2	
	Less Depreciation on office furniture and equipment	103 10 6		
	Transfer to *Mineralogical Abstracts* Fund .	199 11 5		
			303 1 11	
5650				5807 8 3
1178	Publications Fund		. . .	1177 13 9
	Subscriptions, &c., received in advance—			
123	Members' subscriptions and entrance fees		. . .	171 5 2
	Sundry creditors—			
	Oxford University Press for Magazine No. 258 . . .		563 9 8	
	Oxford University Press for Magazine No. 259 (estimated) .		533 0 0	
	Royal Entomological Society for house expenses . . .		28 19 0	
	Sundry editorial expenses		55 0 0	
	Royal Society for loan (Parliamentary Grant-in-aid for scientific publications)		750 0 0	
	Miscellaneous creditors		129 14 11	
1423				2060 3 7
£8374				£9216 10 9

B. MIERS-SPENCER

£		£ s. d.	£ s. d.
	Fund Account—		
	Balance per Balance Sheet at 31 December 1961 . . .	859 9 10	
	Add Excess of income over expenditure for the year ended 31 December 1962	125 0 3	
859			984 10 1
£859			£984 10 1

OCIETY

1 DECEMBER 1962

UND

961 £	Assets	£ s. d.	£ s. d.
	Office furniture and equipment—		
	Original cost	1035 5 0	
421	*Less* depreciation	705 18 1	
			329 6 11
	Investments (at cost or as valued at 31 December 1951)—		
	£2232. 9*s.* 3½ % War Stock 1952	1856 8 6	
	£753. 12*s.* 11*d.* 4 % Consolidated Stock 1957	694 4 9	
	£606. 4*s.* 6*d.* 4 % Funding Stock 1960–90	598 5 0	
	£250 3 % Savings Bonds 1960–70	216 17 6	
	£1013. 9*s.* 6*d.* 3 % Savings Bonds 1965–75	916 7 0	
	£175. 6*s.* 6*d.* 3 % British Transport Stock 1978–88	127 1 3	
	£275. 2½ % Consolidated Stock	169 2 6	
	£261. 12*s.* 6*d.* 3½ % Treasury Stock 1977–80	244 8 3	
	£1120. 16*s.* 7*d.* 4½ % British Electricity Stock 1967–9	1065 17 3	
5889			5888 12 0
	Note:—The total market value of the above investments at 31 December 1962 was £5095. 16*s.* 0*d.*		
	Deposits—		
835	Balance with Post Office Savings Bank		856 1 4
	Subscriptions, &c., in arrears—		
195	Members' subscriptions and entrance fees		173 1 10
	Sundry debtors—		
63	*Mineralogical Abstracts*, for loan from Mineralogical Society of Great Britain		500 0 0
	Cash—		
	Coutts & Co., London	1146 8 6	
	Barclays Bank, Harpenden	68 16 1	
	Cambridge & District Trustee Savings Bank	202 17 6	
	Cash in hand, London	20 0 0	
	Cash in hand, Harpenden	5 10 0	
	Cash in hand, Cambridge	25 16 7	
971			1469 8 8
8374			£9216 10 9

Note:—The value of the Society's library and stock of publications is not included in the above assets.

IEMORIAL FUND

£		£ s. d.	£ s. d.
	Investments (at cost)—		
	£504. 17*s.* 4*d.* 3½ % War Stock 1952	439 7 0	
	£208. 11*s.* 4½ % British Electricity Stock 1967–9	200 0 0	
	5½ % Esso Petroleum 1st Debenture Stock 1979–83	100 0 0	
639			739 7 0
	Note:—The total market value of the above investments at 31 December 1962 was £609. 19*s.* 11*d.*		
220	Cash—Coutts & Co., London		245 3 1
£859			£984 10 1

5 *March* 1963

H. P. Rooksby, P. G. Embrey } Auditors

A. F. Seager, Hon. Treasurer

MINERALOGICAL SOCIETIES OF

MINERALOGICAL

INCOME AND EXPENDITURE ACCOUNT

1961 £	Income	£ s. d.	£ s. d.
	Subscriptions—		
	Mineralogical Society of America	539 5 11	
	Mineralogical Society of Great Britain	648 0 0	
1301			1187 5 11
1905	Sales		1982 11 9
317	Balance, being excess of expenditure over income		963 2 3
£3523			£4132 19 11

BALANCE SHEET AS AT

£	Liabilities	£ s. d.	£ s. d.	£ s. d.
	Fund Account—			
	Balance per Balance Sheet at 31 December 1961	125 16 4		
	Add Capital contribution from Mineralogical Society of America	199 11 5		
	Capital contribution from Mineralogical Society of Great Britain	199 11 5		
	Loan from Mineralogical Society of Great Britain	500 0 0		
			1024 19 2	
	Less Depreciation on office furniture and equipment	14 2 2		
	Excess of expenditure over income for year ended 31 December 1962	963 2 3		
126			977 4 5	
				47 14 9
69	Subscriptions received in advance			80 0 0
	Sundry creditors—			
	Royal Entomological Society for house expenses		14 9 7	
	Editorial expenses		1 7 8	
	Overdraft on bank account at Coutts & Co., London		56 4 5	
905				72 1 8
£1100				£199 16 5

MERICA AND GREAT BRITAIN

BSTRACTS

OR THE YEAR ENDED 31 DECEMBER 1962

£	Expenditure	£ s. d.	£ s. d.
	Mineralogical Abstracts—		
	Vol. 15, Nos. 3 to 6 inclusive:		
	Printing	2669 15 3	
	Distribution	335 3 1	
286			3004 18 4
	Editorial expenses—		
	Editor's honorarium	400 0 0	
	Assistant Editor's stipend	520 13 8	
	General editorial expenses	28 15 10	
987			949 9 6
	Office expenses—		
	Office rental and house expenses	149 15 4	
	Printing and stationery	10 14 11	
	Postage	18 1 10	
250			178 12 1
523			£4132 19 11

DECEMBER 1962

£	Assets	£ s. d.	£ s. d.
	Office furniture and equipment—		
	Original cost	141 1 4	
	Less depreciation	49 4 11	
82			91 16 5
107	Subscriptions in arrears		108 0 0
911	Cash—Coutts & Co., London		0 0 0
00			£199 16 5

March 1963

H. P. Rooksby } Auditors
P. G. Embrey }

A. F. Seager, Hon. Treasurer

estimated intensities are substituted in two empirical functions that are sensitive to compositional variations.

2. Phosphate minerals in a calculus from the reticulo-rumen of the sheep: by Mr. S. E. Ellis with X-ray determination by Dr. R. J. Davis and chemical analyses by Mr. D. I. Bothwell (vol. 33, p. 600).

3. Melting relations of Tertiary granitic rocks in Skye and Rhum: by Dr. G. M. Brown (vol. 33, p. 533).

4. An occurrence of nephrite jade in West Pakistan: by Dr. B. C. M. Butler (vol. 33, p. 385).

5. The determination of the calcite:aragonite ratio in mollusc shells by X-ray diffraction: by Mr. T. T. Davies and Dr. P. R. Hooper (vol. 33, p. 608).

The following papers were taken as read:

1. The högbomite polytypes: by Dr. Duncan McKie (vol. 33, p. 563).

2. β-Ferric oxyhydroxide–akaganéite: by Dr. A. L. Mackay (vol. 33, p. 270).

3. Meteorite lists and catalogues, 1949–62: compiled by Dr. Brian Mason (vol. 33, p. 265).

4. X-ray, optical, and morphological observations on hodgkinsonite from Franklin Furnace: by Mr. W. M. B. Roberts and Mr. F. M. Quodling (vol. 33, p. 343).

5. Some natural analcime solid solutions: by Dr. J. F. G. Wilkinson (vol. 33, p. 498).

PROCEEDINGS OF THE MINERALOGICAL SOCIETY (1963–64)

EXCERPT MINUTES OF COUNCIL MEETING

Held in the Apartments of the Geological Society, Burlington House, London, W., 24 January 1963, at 3 p.m.

Prof. L. R. Wager, President, in the Chair

The following were provisionally elected Ordinary Members of the Society: Peter Bayliss, Charles Kent Brooks, Neville Rowland Hill, Richard William Lounsbury, Guerry Hamnick McClellan, Maynard Slaughter, Julie Chi-sun Yang.

The resignations of Mrs. E. R. S. Candlin and Messrs. W. Anderson, J. F. T. Blott, C. L. Christ, J. J. de Lange, G. K. Jones, R. L. Gordon, and R. Rice were accepted.

The deaths of H. S. L. Jackson and A. Muir were reported.

Reports were received from the Treasurer, the Editors, the Clay Minerals Group, and the Subcommittee on new interests to the Society.

Dr. J. Zussman, Dr. A. E. Ringwood, and Mr. R. Phillips were proposed as the Society's representatives on the Mineral Data, Cosmic Mineralogy, and Ore Microscopy Commissions respectively of the International Mineralogical Association.

GENERAL MEETING

Held in the Apartments of the Geological Society, Burlington House, London W., 24 January 1963, at 5 p.m.

Prof. L. R. Wager, President, in the Chair

The elections of Ordinary Members of the Society provisionally made by the Council were confirmed.

The following papers were read and discussed:

1. Reyerite: By Dr. R. A. Chalmers, Dr. V. C. Farmer, Mr. R. I. Harker, Dr. S. Kelly, and Dr. H. F. W. Taylor (vol. 33, p. 821).

2. An X-ray investigation of synthetic pyroxenes in the system acmite–diopside–water at 1000 kg/cm^2 water-vapour pressure: by Dr. J. Nolan and Dr. A. D. Edgar (vol. 33, p. 625).

Reports were received from the Treasurer, the Editors, the Publications Committee, the Clay Minerals Group, the Committee on Ore Mineralogy, and the Subcommittee on Staff Salaries.

GENERAL MEETING

Held in the Apartments of the Geological Society, Burlington House, London W., 6 June 1963, at 5 p.m.

Prof. L. R. Wager, President, in the Chair

The elections of Ordinary Members provisionally made by the Council were confirmed.

The following exhibits were shown:

1. Cinnabar from Rutland Cavern, Matlock Bath, Derbyshire: by Dr. R. S. W. Braithwaite, Mr. T. B. Greenland, and Mr. G. Ryback.

2. Celestine and aurichalcite from Clayton adit, Ecton Hill, Wetton, Staffordshire: by Dr. R. S. W. Braithwaite and Mr. T. B. Greenland.

3. Pegmatite minerals from Southern Rhodesia and S.W. Uganda: by Mr. M. J. Gallagher.

The following papers were read and discussed:

1. An occurrence of morenosite in Ireland: by Mr. R. J. King and Mr. A. M. Evans.

2. Xanthiosite and aerugite: by Dr. R. J. Davis and Dr. M. H. Hey.

3. An unusual distribution of precipitates in a diamond: by Dr. C. J. Shah and Dr. A. R. Lang (vol. 33, p. 594).

4. The recalculation of amphibole analyses: by Mr. R. Phillips (vol. 33, p. 701).

GENERAL MEETING

Held in the Geology Department of Manchester University, 25 September 1963, at 2.30 p.m.

Prof. L. R. Wager, President, in the Chair

The following exhibits were shown:

1. Stalactitic hydrozincite from Ecton mines, Wetton, Staffordshire: by Dr. R. S. W. Braithwaite, Mr. G. Ryback, and Mr. T. B. Greenland.

2. Azurite from Sykes, Bowland Forest High, Yorkshire: by Dr. R. S. W. Braithwaite and Mr. T. B. Greenland.

The following papers were read and discussed:

1. Rhythmic amphibole overgrowths in appinites associated with explosion-breccias in Argyll: by Dr. D. R. Bowes, Dr. E. D. Kinloch, and Dr. A. E. Wright (vol. 33, p. 963).

2. The composition of arsenopyrite in the Ylöjärvi copper deposit, S.W. Finland: by Mr. A. H. Clark.

X-ray powder diffraction and fluorescence methods have been used to determine the compositional variations (As/S ratios, Co, Ni, and Sb) shown by arsenopyrite in the Ylöjärvi deposit, in order to evaluate the application of this mineral as a geobarometer/geothermometer; the temperatures of deposition were estimated independently by analysis of blende and hexagonal pyrrhotine.

3. A petrographic and geochemical study of back-veining and hybridization at a gabbro felsite contact in Coire Dubh, Rhum, Inverness-shire: by Dr. A. C. Dunham (vol. 33, p. 887).

4. Occurrence of danalite and genthelvite in Nigeria: by Mr. J. Taylor and Mr. G. Jefford (with an appendix on X-ray diffraction data by Mr. J. E. T. Horne and Mr. B. Atkin).

Danalite and genthelvite occur in veins and adjacent greisens in the Younger Granite ring complexes. Three new analyses of genthelvite and four of danalite are presented, the compositions ranging from $He_7Da_5Ge_{88}$ to $He_6Da_{53}Ge_{41}$, in which the symbols represent the end members helvine, danalite, and genthelvite respectively. The physical properties are consistent with previous accounts. The lattice parameter (in Å) is given by the equation $a = 8{\cdot}113_8 + (1{\cdot}86_6\mathrm{He} + 0{\cdot}82_7\mathrm{Da})10^{-3}$, where He and Da are molecular proportions expressed as percentages. Indexed powder data are listed. The paragenesis is discussed and an antipathetic relationship noted between genthelvite and danalite on the one hand and fluorite and topaz on the other.

5. Aspects of the geochemistry of arsenic and antimony, exemplified by the Skaergaard intrusion: by Dr. J. Esson, Dr. R. H. Stevens, and Dr. E. A. Vincent.

EXCERPT MINUTES OF COUNCIL MEETING

Held in the Apartments of the Geological Society, Burlington House, London W., 7 November 1963, at 3 p.m.

Prof. L. R. Wager, President, in the Chair

The following were provisionally elected Ordinary Members of the Society: John David Bell, Stephen George Fleet, Andrew William Flegmann, Edward Alexander Cameron Follett, Eric Frank Lawton, Victor Raymond McGregor, Michael Nicolaou, Tjerk Peters, Anthony George Plant, John Preston, Alfred Edward Ringwood, Andrew Theodore Vladimir Rothstein, Melvin C. Stinson, Maurice Stone, Robert Neville Thompson.

The death of Prof. Manuel Munoz Taboadela was reported.

The reappointment of Prof. C. E. Tilley as a Managing Trustee for a further period of five years was confirmed.

Prof. L. R. Wager was nominated to succeed Prof. C. E. Tilley as the Society's representative on the British National Committee for Geology.

Reports were received from the Treasurer, the Editors, the Committees on Ore Mineralogy and on Geochemistry, and the Clay Minerals Group. The Clay Minerals Group recommended that Messrs. Blackwell's Scientific Publications Ltd. be appointed to handle publication of the Clay Minerals Bulletin from 1 January 1964, that the annual subscription rate covering the Bulletin and Circular be raised to 40*s*., and that members of the Mineralogical Society who have notified their wish to be members of the Clay Minerals Group receive the Bulletin and Circular for 20*s*. per annum. These recommendations were approved.

It was agreed to change the termination of the Society's financial year to a more convenient date.

The Secretary read the draft of the Annual Report of the Council for the past year and this was approved for presentation at the ensuing Anniversary Meeting.

ANNIVERSARY MEETING

Held in the Apartments of the Geological Society, Burlington House, London W., 7 November 1963, at 5 p.m.

Prof. L. R. Wager, President, in the Chair

The elections of Ordinary Members of the Society provisionally made by the Council were confirmed.

The General Secretary read the following:

ANNUAL REPORT OF THE COUNCIL FOR 1962–63

Membership. The total membership on 31 October 1963 was 816 against 772 on 31 October 1962. Forty-four new members have been elected during this year, eight members have resigned and the Society has lost by death four Ordinary Members. On 31 October 1963 the membership consisted of 9 Honorary Members and 807 Ordinary Members, of whom 71 are Life Members; 377 members are also members of the Clay Minerals Group.

Meetings. The total attendance at the five general meetings held during the session 1962–63 was 227 members and 39 guests, giving an average of 53 per meeting. At these meetings 23 papers were read, 14 papers were taken as read, and 8 exhibits shown.

At two meetings of the Clay Minerals Group, held in London and Plymouth, respectively, fifteen papers were read: the average attendance was 35.

Publications. Three numbers of the Mineralogical Magazine have been issued during 1963, and the fourth (December 1963) is expected during November 1963. The four numbers (260–263) will contain Proceedings for 1962 (20 pages), 33 papers, 16 short communications, 18 book reviews in 392 pages, with 1 plate and 88 text figures. Three numbers, including the December 1962 number (vol. 15, no. 8), of the Mineralogical Abstracts have been issued during 1963, and the fourth is in the course of printing. The December 1962 number (the index to volume 15) contained the Author's Index (with 7,400 items in 47 pages) and the Subject Index (with 14,000 paged references and 1,600 unpaged cross references in 53 pages); this number of 23,000 items in all is contained in 110 pages. The March, June, and September 1963 numbers contain 2779 abstracts and 50 book notices in 322 pages.

Two numbers (28 and 29) of the Clay Minerals Bulletin have been issued during the year.

Financial. The accounts for the calendar year 1962 are published in *Mineralogical Magazine* no. 262 (September). During the year income from the General Fund exceeded expenditure by £400. 1*s*. 4*d*. The excess of assets (exclusive of the Society's library and stock of publications) over liabilities at 31 December 1962 was £6791. 18*s*. 4*d*. compared with £6509. 18*s*. 8*d*. at the close of 1961.

The cost of the first two numbers of the *Mineralogical Magazine* published in 1963 was £1126. 15*s*. 2*d*; and the first number of *Mineralogical Abstracts* was £967. 17*s*. 8*d*.

Sales of publications so far during 1963 are as follows: *Mineralogical Magazine* £3782. 2*s*. 3*d*.; *Mineralogical Abstracts* £2451. 0*s*. 10*d*; X-ray monograph £1566. 18*s*. 9*d*.; D.T.A. monograph £191. 0*s*. 3*d*.

Grant from the Nuffield Foundation. The sum of £147. 16*s*. 2*d*. was received from the Nuffield Foundation for the cost of advertising *Mineralogical Magazine* and *Mineralogical Abstracts*.

The balances at the Society's Bankers and in the Post Office Savings Bank on 31 October 1963 were: General Fund £7430. 15*s*. 7*d*., Miers Memorial Fund £262. 17*s*. 3*d*.

General. (i) As a result of the examination of the development of new fields of interest to the Society (June 1962) two committees have been set up. They are the Committee on Ore Mineralogy (Chairman, Prof. W. A. Deer), and the Committee on Geochemistry (Chairman, Prof. L. R. Wager). The respective aims of the committees are to further the study of opaque and semi-opaque minerals, including coals, and to advance the knowledge of geochemistry, particularly in relation to mineralogy, crystallography, petrology, and the study of meteorites.

(ii) It was decided to dedicate a volume of the Magazine to Prof. C. E. Tilley, having regard to his contributions and influence in the fields of mineralogy, crystallography, and petrology. Over fifty co-workers and former students have accepted invitations to contribute to the volume. The editors, Prof. W. A. Deer and Dr. S. R. Nockolds, expect this commemorative volume to run to over 300 pages.

(iii) Prof. S. Tomkeieff's visit to Russia to meet scientists and abstractors was supported by the Council to the tune of the Moscow-held royalties arising from the Russian translation of the Society's monograph on X-ray identification of clay minerals.

(iv) The sale and reprinting of back numbers, Nos. 1–87, of the Magazine has been placed in the hands of Messrs. William Dawsons. (These are the volumes issued prior to the initiation of the *Abstracts* in 1921.)

After the adoption of the Annual Report, a vote of thanks to the Geological Society for the use of their rooms was carried with acclamation.

The Scrutineers reported the result of the ballot, and the President read the list of Officers and Council elected for the session 1963–64:

President: Prof. J. H. Taylor, M.A., B.Sc., Ph.D., F.G.S., F.R.S.
Vice-Presidents: K. C. Dunham, D.Sc., Ph.D., S.D., M.I.M.M., F.G.S., F.R.S.; M. H. Hey, M.A., D.Sc.
Treasurer: A. F. Seager, B.Sc., Ph.D., A.K.C., F.G.S.
General Secretary: J. R. Butler, M.A., Ph.D., F.G.S.
Foreign Secretary: W. Campbell Smith, C.B.E., M.C., T.D., M.A., Sc.D., F.G.S.
Editor of the Mineralogical Magazine: M. H. Hey, M.A., D.Sc.
Editor of Mineralogical Abstracts: J. Phemister, M.A., D.Sc., F.R.S.E., F.G.S.

Ordinary Members of Council

T. W. Bloxam, B.Sc., Ph.D., F.G.S.
T. Deans, M.A.
R. A. Howie, M.A., Ph.D.
D. G. Murchison, B.Sc., Ph.D.
R. Phillips, B.Sc.
W. J. Wadsworth, M.A., D.Phil., F.G.S.
S. H. U. Bowie, B.Sc.
W. A. Deer, M.Sc., Ph.D., F.R.S., F.G.S.
A. P. Millman, Ph.D., D.I.C., A.R.S.M., B.Sc., F.G.S.
R. W. B. Nurse, D.Sc., F.Inst.P.
E. Stumpfl, Dr. rer.nat.
J. Zussman, M.A., Ph.D.

The retiring President, Prof. L. R. Wager, in welcoming Prof. J. H. Taylor to the Chair, thanked the Officers of the Society for their help during his period of office, and expressed the hope that Prof. Taylor's Presidency would be a happy one.

Prof. Taylor, in reply, thanked the Society for his election, and proposed a vote of thanks to the retiring President and Ordinary Members of Council, which was carried with acclamation.

The following exhibits were shown:

1. Cinnabar from Masson Hill, Matlock, Derbyshire: by Mr. A. W. G. Kingsbury.

2. Bismutoferrite from South Terras mine, St. Stephen-in-Brannel, Cornwall: by Mr. A. W. G. Kingsbury.

3. The quartz wedge and sensitive-tint plate and colour blindness: by Dr. F. E. Tocher.

The following papers were read and discussed:

1. Four new uranium-lead ages from Cornwall: by Mr. R. P. C. Pockley.

2. Additional uranium-lead ages from South-West England: by Mr. A. G. Darnley, Dr. T. H. English, Mrs. O. Sprake, and Dr. E. R. Preece.

Five new analyses by the complete lead method have been obtained on concentrates prepared from uraniferous vein material occurring in south-west England. The following results have been calculated from the 206/238 ratio:

Uraninite	South Crofty, Cornwall	277 ± 11 My.
Uraninite	Geevor, Cornwall	223 ± 5 My.
Pitchblende-coffinite	King's Wood, Devon	209 ± 5 My.
Pitchblende	Wheal Bray, Cornwall	166 ± 8 My.
Pitchblende-coffinite	South Terras, Cornwall	47 ± 2 My.

In addition two chemical analyses of pitchblende-coffinite concentrates from Geevor have provided ages of 40 and 45 My. respectively. The significance of the results was discussed.

3. The distinction of mullite and sillimanite by electron diffraction technique: by Dr. D. G. W. Smith and Dr. J. D. C. McConnell.

Electron diffraction photographs of a number of natural and synthetic mullites and a standard sillimanite have been obtained, and interpreted using diffraction data due to Agrell and Smith. Intimate association of sillimanite and mullite occurs in the breakdown of muscovite in a thermal metamorphic aureole (Sithean Sluaigh, Strachur, Argyllshire). The position and diffuseness of mullite reflections ($h0l$) with $l = \frac{1}{2}$ have been studied. These maxima are symmetrically disposed in pairs about the positions of sillimanite maxima with l odd. They lie on a^* rows and show variable separation in different specimens studied. These diffraction conditions are closely analogous with those observed in the intermediate plagioclases (paired 'e' maxima) and in nepheline, and a similar explanation is envisaged in terms of anti-phase domain structure.

4. The mineralogy and chemistry of the nickel carbonates: by Dr. Thelma Isaacs (vol. 333, p. 663).

The following papers were taken as read:

1. The stereographic projection: a procedural revision in crystallography: by Dr. M. J. Oppenheim (vol. 33, p. 697).

2. A simple single-axis rotation apparatus: by Dr. N. H. Hartshorne (vol. 33, p. 693).

3. The unit-cell of aenigmatite: by Dr. C. H. Kelsey and Dr. D. McKie (vol. 33, p. 986).

4. Notes on a new occurrence of stilpnomelane from North Wales: by Dr. D. W. Matthews and Dr. J. H. Scoon (vol. 33, p. 1032).

5. The nomenclature of the natural alloys of osmium and iridium: by Dr. M. H. Hey (vol. 33, p. 712).